

Dual technology and perceptions of Iranian chemical and biological weapons

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ABSTRACT: This paper is both a contribution to a case-study in policy problems presented by dual technology, and a critical review of writings about Iranian chemical and biological weapons. It begins with an account of what Iranian leaders have stated publicly about their policies and programmes in this area. It then asks whether there might be divergence between declared policy and actual policy, and how, having regard to 'dual use', any such divergence might accurately be perceived by people outside Iran. It goes on to review the available literature, first on Iranian chemical-weapons programmes and then on biological weapons, in each case applying an express criterion of reliability (as distinct from credibility) to what has been written. The overall conclusion is that the obscurity imposed upon our view by 'dual use' can be dispelled by data available, if at all, only within the intelligence community.

Introduction

We are in a period of renewed concern about weapons of mass destruction exacerbated by what seems to be determination on the part of Iran to preserve both a nuclear option and its membership of the nuclear-weapons Non Proliferation Treaty. We have become sensitized to state sponsorship of terrorism, and an apparently boundless “war against terrorism” is in progress. The question of Iranian chemical and biological weapons has thus come to the fore. However, our picture of these lesser WMD that might possibly be in the hands of Iran is oddly out of focus, blurred by contradictory information and assertion. Partly this is because the final failure of the Iraq Survey Group to find any WMD in Iraq has undermined the assurance of those who have hitherto purported to inform us of such matters. Partly, too, it is a consequence of the nature of chemical and biological weapons, which, pre-eminently, are products of dual technology.

It is both as an element of a case-study in policy problems presented by dual technology, and as a critical review of what is currently being said about Iranian chemical and biological weapons, that the present paper has been written. It begins with an account of what Iranian leaders have stated publicly about their policies and programmes in this area. It then asks whether there might be divergence between declared policy and actual policy, and how, having regard to ‘dual use’, any such divergence might accurately be perceived by people outside Iran. It goes on to review the available literature, first on Iranian chemical-weapons programmes and then on biological weapons, in each case applying an express criterion of reliability (as distinct from credibility) to what has been written. The overall and perhaps unsurprising conclusion is that the obscurity imposed upon our view by ‘dual use’ can be dispelled by data available, if at all, only within the intelligence community.

The declared policy of Iran on chemical and biological weapons

The Islamic Republic of Iran has often declared its policy on chemical and biological weapons. In recent years it has typically done so in reaction to allegations made against it, so its declaratory statements have tended to address different aspects of policy. A common thread, however, has been reaffirmation of Iranian support for the three major international treaties on chemical and biological weapons: the 1925 Geneva Protocol outlawing use of the weapons, to which Persia unreservedly became party on 5 November 1929; the 1972 Convention on the Prohibition of Biological and

Toxin Weapons (the BWC), which Iran ratified on 22 August 1973; and the 1993 Convention on the Prohibition of Chemical Weapons (the CWC), which the Islamic Republic ratified on 3 November 1997. Iran (as Persia) had also joined antecedents of these treaties, notably the 1899 Hague Gas Projectile Declaration and the 1899 Hague Convention whose annexed *Regulations Respecting the Laws and Customs of War on Land* prohibited use of “poison or poisoned weapons” and also set forth the principle that “the right of belligerents to adopt means of injuring the enemy is not unlimited”. For longer than many countries, therefore, the declared position of Iran has been one of opposition to chemical and biological weapons.

This continues. On 3 February 2002, the Iranian Foreign Minister, Dr Kamal Kharrazi, wrote to the Secretary-General of the United Nations as follows:¹

The Islamic Republic of Iran does not seek weapons of mass destruction and [...] is a party to the NPT, CWC and BWC and has signed the CTBT. As the only victim of weapons of mass destruction in the last generation, the Iranian people have felt the horror of these weapons and are determined to ensure that no other people will have to go through the same agony. We intend to pursue this objective by advocating and promoting a world free from all these inhuman weapons. It must be underlined that [...] weapons of mass destruction have no place in Iran's defence doctrine. Iran is fully committed to observing all relevant international instruments on prohibition of such weapons and its compliance has been repeatedly verified by the relevant international organizations. At the same time, Iran insists and vigorously pursues its inalienable rights to develop its nuclear, chemical and biological industries for peaceful purposes.

In this comprehensive statement rejecting WMD, the “horror” to which the Foreign Minister referred was Iraq’s use of chemical weapons against Iran during the war of 1980-88. Data published by the World Health Organization indicate that at least 25,000 Iranians, both civil and military, were killed then by these weapons; that more than 100,000 Iranians received medical treatment for acute effects of the weapons; and that 34,000 of them were still, 13 years after the war had ended, suffering chronic effects.² The Iraq Survey Group (ISG) recently reported to the Director of US Central Intelligence that Iraq had used some 1800 tons of mustard gas during the war and 740

¹ UN document A/56/806—S/2002/140 dated 4 February 2002.

² World Health Organization, *Public Health Response to Biological and Chemical Weapons: WHO Guidance*, Geneva: WHO, 2004, at page 149.

tons of nerve gas.³ Did the “horror” extend to biological warfare? In July 1987 the official Iranian news agency charged, perhaps mistakenly, that, in the chemical attack on Sardasht the previous month, Iraq had resorted also to biological weapons of a type that infected wounds;⁴ but, beyond an account of Iraqi work on *Clostridium perfringens* as a biological weapon that had commenced in April 1988, the ISG report presents no information bearing on this allegation, and there seem to have been no others from Iran that Iraq had actually used biological weapons during the war.

Dr Kharrazi also alluded to that most fundamental of problems confronting those who would determine compliance with the nuclear, chemical and biological treaties, the problem of ‘dual use’. Even though (he implicitly recognised) WMD capability could in large measure be acquired through nuclear, biological or chemical industries built to serve “peaceful purposes”, any consequent imposition of constraints that might inhibit bona fide applications of dual-use technology would conflict with, as he put it, Iran’s “inalienable rights”. He did not say that Iran would therefore reject such constraints, but by no means did his statement exclude the possibility, which the hostile Iranian policy towards the Australia Group these past twenty years has consistently emphasized. Either way, Dr Kharrazi was reminding the outside world of a pervasive ambivalence that could be distorting its view of Iran’s nuclear, biological and chemical programmes.

A more recent statement by a high Iranian official is also instructive. On 19 June 2004, the Secretary-General of the Supreme National Security Council, Dr Hassan Rouhani, spoke as follows when interviewed on Al-Jazeera television:⁵

The decision made by the Islamic Republic of Iran not to possess weapons of mass destruction, including nuclear weapons, goes back to many years and not only the near past. Therefore, even during the eight-year war Iraq imposed on us and although Iraq used chemical weapons against Iran, we did not seek the production of nuclear, chemical, or biological weapons. Our decision not to possess weapons of mass destruction is strategic because we believe that these weapons will not provide security for Iran. On the contrary, they will create big problems. Iran exerted huge efforts during the past few years to build bridges of confidence with

³ *Comprehensive Report of the Special Adviser to the DCI on Iraq’s WMD*, 30 September 2004, volume III, p 10.

⁴ AP, 2 July 1987, as quoted in the Nuclear Threat Initiative database www.nti.org/e_research/profiles/Iran/.

⁵ Al-Jazeera TV (Doha), 1838 hrs GMT 19 Jun 04, as translated from the Arabic in BBC-WWM, 21 Jun 04.

the states of the region. We absolutely do not want to blow up these bridges by mobilizing our resources to produce weapons of mass destruction. We are confident that our possession of these weapons will force these countries to seek the support of big powers. Consequently, regional security will worsen. This will not serve our national security. Therefore, our efforts focused and will continue to focus on building bridges of confidence with the states of the region before focusing on the possession of weapons of mass destruction.

In what Dr Rouhani here told his interviewer, there was no allusion to contrary lessons that some might draw from the experience of Iraq: that nerve and mustard gas well integrated into force structure and doctrine can redress great manpower inferiority on the battlefield; and that possession of chemical and especially biological weapons can give serious pause to any “big powers” contemplating invasion. Indeed, in so conspicuously making no reference to the chemical armament programme that Iran had in fact embarked upon in the 1980s, even seeming to deny its existence, Dr Rouhani may have been suggesting that the military value of such weapons to Iran would always be trivial in comparison with the penalties incurred by possessing them.

Regarding chemical weapons specifically, the Director-General of the Iranian Foreign Ministry, Ambassador Mohammad Alborzi, had on 17 November 1998 included the following passage in the Iranian national statement he delivered in The Hague during the third session of the Conference of the States Parties to the CWC:⁶

Faced at the time [of the last years of the Iraq-Iran war] with continued and expanding use of chemical weapons against our soldiers and civilians alike, and persistent muteness and inaction on the part of the United Nations Security Council, Iran was left with no alternative but to seek an effective means of deterrence in the hope that it could halt or at least limit the barrage of these barbarous weapons on its people. This particularly became an absolute necessity when threats were made of chemical bombardment of the cities in the final stages of the conflict, and some indeed were carried out against civilian centers as reported by United Nations investigating missions. In this context, the decision was made that, on a strictly limited scale, capability should be developed to challenge the imminent threat particularly against the civilian populated centers. We declared, at the time, that Iran had chemical weapons capability, while

⁶ *The CBW Conventions Bulletin* no 42 (December 1998), p 43.

maintaining the policy not to resort to these weapons and rely on diplomacy as the sole mechanism to stop their use by its adversary. The war ended soon after. Following the establishment of cease fire, the decision to develop chemical weapons capabilities was reversed and the process was terminated. It was reiterated consequently that Iran would not seek or produce chemical weapons and would accelerate its efforts to ensure early conclusion of a comprehensive and total ban under the CWC. This has continued to be my government's policy ever since.

The statement of Dr Alborzi coincided with Iran's submission to the CWC's international oversight body, the Organization for the Prohibition of Chemical Weapons (OPCW), of the declaration required under CWC Article III about any chemical weapons Iran might now possess and about any chemical-weapons production facilities Iran might have designed, constructed or used at any time after 1945. Iran had signed the Convention at the opening signatory conference in Paris in January 1993 but had delayed its ratification until some six months after the treaty had entered into force in 1997, and even then it did not submit the declaration for another eleven months. In such tardiness, Iran was by no means unique among CWC states parties. If the examples of the United States and the Russian Federation are anything to go by, the delay signified discord in the formulation of governmental policy on implementation of the treaty, perhaps on how exactly Iran should dispose of all its now-outlawed capability. The Iranian declaration itself casts no public light on this, for Iran, as was its right, insisted that the declaration be handled as a protected document according to the confidentiality provisions of the CWC. So its content is not in the public domain. Subsequent OPCW publications, however, indicate that Iran declared possession of two chemical-weapons production facilities (of undisclosed location) but no stocks of actual chemical weapons.⁷ Unidentified Iranian officials are reported to have stated privately that the two declared production facilities were pilot plants, and that both they and the few hundred tons of chemical warfare agent, including mustard gas, produced in them were destroyed after the war.⁸ A number of CWC states parties have utilized the consultation procedures set out in Article IX of the Convention to seek clarification from Iran regarding its declaration.

⁷ Organisation for the Prohibition of Chemical Weapons, *Annual Report 2000*, The Hague: OPCW, October 2001, at pages 16-17 and 61.

⁸ *The CBW Conventions Bulletin* no 52 (June 2001), p 44.

Britain and the United States have been among them. No state party, even among those vociferous in alleging Iranian violation of the treaty, has yet chosen to activate the challenge-inspection provisions in that same article of the CWC. The first Director-General of the OPCW, Ambassador José Bustani, issued a statement in December 2000 saying that his Secretariat “wishes to reiterate that it has no reason whatsoever to question Iran’s full compliance with the CWC”.⁹ The present Director-General, Ambassador Rogelio Pfirter, has publicly commended Iran for its cooperation with the OPCW.¹⁰ A manifestation of this cooperation has been the convening in Tehran of seven successive annual courses on *Medical Aspects of Defence against Chemical Weapons*, which have allowed medical personnel from OPCW member states to examine and learn from actual victims of chemical warfare.¹¹

Newspapers have reported that the underlying reason why Iran did not retaliate in kind against Iraqi resort to chemical warfare, as it was permitted to do under the Geneva Protocol, was because the founder of the Islamic Republic and its Supreme Leader, Ayatollah Ruhollah Khomeini, had expressly forbidden such action on moral grounds.¹² Although Ayatollah Khomeini is reported to have later given his consent,¹³ Iranian Foreign Minister Ali Akbar Velayati nevertheless stated at the 1989 conference in Paris to reaffirm the Geneva Protocol that Iran had “never resorted to chemical-weapons use, even in retaliation”,¹⁴ notwithstanding the numerous reports to the contrary that had and would continue to be heard.¹⁵

The declared position of Iran against chemical and biological weapons is thus impressive in its longevity and consistency. It appears to be rooted both in that particular tendency in Islamic legal thought¹⁶ from which the Supreme Leader

⁹ *The CBW Conventions Bulletin* no 51 (March 2001), pp 36-37.

¹⁰ IRNA from Tehran in English, 1515 hrs GMT 24 July 2004, as transcribed in BBC-WWM 24 July 2004, as reported in *The CBW Conventions Bulletin* no 65 (September 2004), p 48.

¹¹ *Chemical Disarmament Quarterly*, vol 2 no 3 (September 2004), p 36.

¹² Safa Haeri, *Independent* (London), 30 December 1987; *Islamic Republic* (Tehran), 30 April 1988, as reported by Xinhua, 1 May 1988; both sources as quoted in the Nuclear Threat Initiative database www.nti.org/e_research/profiles/Iran/.

¹³ Patrick Tyler, *Washington Post*, 3 May 1990, p A37.

¹⁴ Gordon M Burck and Charles C Flowerree, *International Handbook on Chemical Weapons Proliferation*, Westport, CT: Greenwood Press, 1991, p 239, quoting the text as delivered.

¹⁵ For an extensive review, see Jean Pascal Zanders, “Allegations of Iranian Use of Chemical Weapons in the 1980-88 Gulf War: A research note”, 29 March 2001, as posted on <http://projects.sipri.se/cbw/>.

¹⁶ For a concise but documented discussion of applicable Islamic legal doctrine, see Kristina S Westerdahl, Roger Roffey, Karin Hjalmarsson, Göran Bucht, Jean Pascal Zanders and John Hart, *Iran’s Disarmament and Arms Control Policies for Biological and Chemical Weapons, and Biological Capabilities*, Umeå: Swedish Defence Research Agency, December 2003, report FOI-R—0904—SE.

reportedly drew and also in international law. In that last regard, however, it is as well to recall what the present Chairman of the Expediency Council and former Iranian President Hojjat ol-Islam Akbar Hashemi-Rafsanjani said on 19 October 1988 in his then capacity as acting Commander-in-Chief of Iranian Armed Forces: “Chemical and biological weapons are poor man’s atomic bombs and can easily be produced. We should at least consider them for our defence [...] Although the use of such weapons is inhuman, the war taught us that international laws are only drops of ink on paper.”¹⁷

Perceptions of actual Iranian policy on chemical and biological weapons

Perhaps Iranian attitudes towards international law have changed since those dismal times two decades ago when the “big powers” seemed to condone Iraqi contempt for the Geneva Protocol. There is no shortage today, even so, of sceptics who regard Iranian declarations of policy on chemical and biological weapons also as mere drops of ink on paper. Where, if one looks for operational constraints that could function to reinforce declared policy and embed its tenets in actual policy, might they be found? Answer: in the shifting politics, as Dr Rouhani told his television interviewer in 2004, of regional security, and in the tradition of Islam that, for many Muslims, eschews dependence on indiscriminate weapons. There are, as history shows, other tendencies in Islamic thought on the proper conduct of warfare. Constraints are not to be found in inadequacies of Iranian science or manufacturing industry. On the contrary: Iran has a substantial chemical industry including an expanding biotechnological sector.¹⁸ Just as many OECD member-states that are parties to the BWC and the CWC could produce significant quantities of biological or chemical weapons within a matter of days or weeks if they chose, so too, it can hardly be doubted, does Iran also have an inherent ‘break out’ capacity in its civil industry. It would perhaps be surprising if Iran had not deliberately exploited certain ‘dual use’ possibilities to ensure that rapid breakout was always possible, even though it might not, in peacetime, be desired.

The existence of any such Iranian policy objective of, so to say, deniable chemical/biological armament of course cannot be demonstrated objectively, and, however credible it may seem, it remains in the world of conjecture. The dominant

¹⁷ *Chemical Weapons Convention Bulletin* no 3 (February 1989), p 8.

¹⁸ See, for example, Deborah L Miller, Ben A Farmer and Sharon H Scholl, *Industrial Chemical Capabilities in Selected Middle East Countries: A Defense S&T Intelligence Study*, US Defense Intelligence Agency and US Army Intelligence Agency, DST-1820S-362-91-SI, 3 September 1991.

intent behind a particular programme of scientific research, for example, or the true *purpose* underlying investment in a particular production facility, is the sort of information necessary for resolving ‘dual use’ ambivalence so as to support or refute the conjecture. In the nature of things, however, this is information that probably cannot be acquired in unambiguous form even by observers quite well endowed with intelligence assets, which in this case would presumably have to be human-intelligence assets inside Iran. Moreover, if such assets existed, would they not need to be guarded so carefully that we would be obliged to suspend belief in information attributed to them that was purveyed at all widely in the world at large? For how would we be able to differentiate the true information from the bodyguard of lies that most probably would accompany it? We must instead do the best we can with second-order information on underlying intent. Such second-order information can be gained from, for example, study of Iranian networks for procurement of dual-use technologies, both tangible and intangible, and of Iranian civil demand for the commodities procured.

Nor is protection of intelligence sources and methods the only problem confronting the analyst of relationships between declaratory and executive policies. It may be the most fundamental problem, but information can often be false for a whole slew of reasons that, on the surface, are indiscernible. For example, purveyors of information may themselves simply be ignorant or ill-informed, or they may wish to find favour or deceive or otherwise advance concealed agendas of their own. Like ‘Chinese whispers’, information may deteriorate in the passing – in its repetition by successive purveyors. And chemical/biological armament is an emotive topic, thereby lending itself readily to campaigns of influence, of vilification or of psychological warfare. Alternative sources of information may be unavailable or else their worth may be no less open to challenge. Therefore, while much can be read about Iranian chemical and biological weapons programmes,¹⁹ a prudent analyst will apply careful criteria of reliability and credibility when using it.

¹⁹ As in: Anthony H Cordesman, *Weapons of Mass Destruction in the Middle East: a Royal United Services Institute Study*, London: Brassey’s, 1991; Kenneth R Timmerman, *Weapons of Mass Destruction: The Cases of Iran, Syria, and Libya*, Los Angeles: Simon Wiesenthal Center, August 1992; Herbert Krosney, *Deadly Business: Legal Deals and Outlaw Weapons: The Arming of Iran and Iraq, 1975 to the Present*, New York: Four Walls Eight Windows, 1993; Anthony H Cordesman and Ahmed S Hashim, *Iran: Dilemmas of Dual Containment*, Boulder CO: Westview Press, 1997; Paula A DeSutter, *Denial and Jeopardy: Denying Iranian Use of NBC Weapons*, Washington DC: National Defense University, 1997; Michael Eisenstadt, *Chemical and Biological Weapons and Deterrence, Case Study 4: Iran*, Washington, DC: Chemical and Biological Arms Control Institute, 1998; W Seth

What follows in this paper is a presentation of open-source information that has been differentiated according to just such standards. The review is divided into a part on chemical weapons and a part on biological weapons, and each of these two parts itself has two sections. The first such section draws exclusively from sources of information that satisfy a strict criterion of reliability, which is this: the information should originate with a cognizant state official speaking or writing attributably for the public record.²⁰ Such sources are quite rare, and most are American, though there are also some British, German, Israeli and Russian ones. The second section uses other sources, namely ones that convey information whose credibility cannot obviously be faulted but which do not satisfy the reliability criterion. This second section is itself

Carus, "Iranian nuclear, biological and chemical weapons: implications and responses", *Middle East Review of International Affairs*, March 1998; Anthony H Cordesman, *Weapons of Mass destruction in Iran: Delivery Systems, and Chemical, Biological and Nuclear Programs*, 28 April 1998, www.csis.org/mideast/reports.WMDinIran4-28-98.htm; Dany Shoham, "The chemical and biological threat to Israel", in Arie Stav (editor), *Ballistic Missiles: The Threat and the Response*, London: Brassey's, 1999, pp124-48; Barry R Schneider, *Future War and Counterproliferation*, Westport CT and London: Praeger, 1999, at pp 32-38 and 43; Gregory F Giles, "The Islamic Republic of Iran and nuclear, biological, and chemical weapons", in Peter R Lavoy, Scott D Sagan and James J Wirtz (editors), *Planning the Unthinkable: How New Powers will use Nuclear, Biological, and Chemical Weapons*, Ithaca NY: Cornell University Press, 2000, pp 79-103; W Seth Carus, "Iran and weapons of mass destruction", *Middle East Review of International Affairs*, vol 4 no 3 (Fall 2000) pp 57-67; Anthony H Cordesman, *National Developments of Biological Weapons in the Middle East: An Analytic Overview*, July 2001, www.csis.org/burke/mb/me_natldev_analytic.pdf; Anthony H Cordesman, *Proliferation in the "Axis of Evil": North Korea, Iran, and Iraq*, 30 January 2002, www.csis.org/burke/proliferation_axis.pdf; Michael Rubin, "Iran's burgeoning WMD programs", *Middle East Intelligence Bulletin*, vol 4 no 3, March/April 2002; Oliver Thränert, "Der Iran und die Verbreitung von ABC-Waffen", *SWP-Studie* [Deutsches Institut für Internationale Politik und Sicherheit: Stiftung Wissenschaft und Politik, Berlin] S 30, August 2003; Anthony H Cordesman with G Ryan Faith, *Iran's Search for Weapons of Mass Destruction*, 7 August 2003, www.csis.org/burke/irans_search_wmd.pdf; Kristina S Westerdahl, Roger Roffey, Karin Hjalmarsson, Göran Bucht, Jean Pascal Zanders and John Hart, *Iran's Disarmament and Arms Control Policies for Biological and Chemical Weapons, and Biological Capabilities*, Umeå: Swedish Defence Research Agency, December 2003, report FOI-R—0904—SE; Dany Shoham, "The chemical and biological threat of Islam", in David Bukay (editor), *Muhammad's Monsters*, Green Forest AR: Balfour Books Inc, 2004, pp 255-79; Armin Tarzi, "The role of WMD in Iranian security calculations: dangers to Europe", *Middle East Review of International Affairs*, vol 8 no 3 (September 2004) pp 91-111; Valerie Lincy and Gary Milhollin, "Iran's forgotten weapons", *Iran Watch Bulletin*, vol 1 issue 1 (December 2004 – January 2005); Dany Shoham, "Image vs reality of Iranian chemical and biological weapons", *International Journal of Intelligence and Counterintelligence*, vol 18 no 1 (January-March 2005) pp 89-141.

²⁰ For further explanation of this criterion, see Julian Perry Robinson, "Chemical-weapons proliferation in the Middle East", in Efraim Karsh, Martin S Navias and Philip Sabin (editors), *Non-Conventional-Weapons Proliferation in the Middle East*, Oxford: Clarendon Press, 1993, pp 69-98, at p 89. Note that application of the criterion excludes from consideration a category of information that commentators often value: the officially sanctioned leak of genuine intelligence. Footnote 83 below provides an example having to do with Iranian efforts to recruit scientists from the biological-weapons programme of the erstwhile USSR. The exclusion is necessary because readers can never be sure that the motivations underlying such leaks have not coloured, even shaped, the leaked information – which, therefore, is unreliable in the absence of independent validation. The criterion is a safeguard, in other words, against that recurrent hazard in the literature on chemical/biological warfare, deliberate misinformation (disinformation).

in two parts, opening with an account drawing solely from statements published by the National Council of Resistance of Iran (NCRI),²¹ which is regarded in some quarters as the Iranian opposition in exile.

Review of information on Iranian chemical weapons in high-grade sources

In November 2004 the US Congress received the following information in a statutory report from the Central Intelligence Agency:²²

Iran is a party to the Chemical Weapons Convention (CWC). Nevertheless, during the reporting period [1 July – 31 December 2003] it continued to seek production technology, training, and expertise from foreign entities that could further Tehran’s efforts to achieve an indigenous capability to produce nerve agents. Iran may have already stockpiled blister, blood, choking, and possibly nerve agents – and the bombs and artillery shells to deliver them – which it previously had manufactured.

Four years previously, open testimony in the Senate from Norman Schindler, the deputy director of the Nonproliferation Center under the US Director of Central Intelligence,²³ had said that Iran possessed “a stockpile of at least several hundred metric tons of weaponized and bulk agent”, including nerve gas. Four years before that, while Iran was still in the process of joining the CWC, the CIA had informed the Senate: “Iran’s stockpile is comprised of several thousand tons of CW agents, including sulphur mustard, phosgene, and cyanide agents, and Tehran is capable of producing an additional 1,000 tons of these agents each year”. The Defense Intelligence Agency, in some contrast, had on the same occasion stated that Iran “produces a variety of agents and may have as much as 2,000 tons of agent in its stockpile”.²⁴

The words of the 2004 CIA report convey three main points. First, Iran had in the past succeeded in manufacturing and weaponizing toxic chemicals of three old-

²¹ On which see www.iran-e-azad.org/english/ncri.html.

²² USA, Central Intelligence Agency, *Unclassified Report to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions, 1 July through 31 December 2003*, released 23 November 2004.

²³ Prepared statement before the International Security, Proliferation and Federal Services Subcommittee of the Senate Governmental Affairs Committee, 21 September 2000.

²⁴ Written responses for the record of the Senate Select Committee on Intelligence submitted after questions on 22 February 1996: 104th US Congress, 2nd session, Senate, Select Committee on Intelligence, hearing, 22 February 1996, *Current and projected national security threats to the United States and its interests abroad*, S. Hrg. 104-510, Washington, DC: US Government Printing Office, 1996, pp 82 and 206.

fashioned agent types (“blister, blood, choking”). This information is consistent with what is described above about the Iranian declaration of past capability to the OPCW. Second, Iran has an on-going programme to develop its own production capacity for a more modern type of chemical weapon, the “nerve agents” (nerve gas), this being a programme that “possibly” has already succeeded. Third, Iran has been seeking to import both tangible and intangible technology that could further its nerve-gas programme. The “could” clearly implies that the technologies being sought are ‘dual use’. Since the CWC outlaws only those dual-use technologies that do not satisfy its general purpose criterion, and assuming the CIA to be careful in its use of language, the “Nevertheless” implies that the CIA knows and is not simply guessing the intent that underlies the importation effort.

Can this really be true? When asked recently by a reporter why, if the CIA were so certain, the United States had not launched a CWC challenge inspection of Iran, an unidentified official observed that the CIA did intelligence not policy. During the first CWC Review Conference in April 2003, to which the US delegation expressed itself “troubled” by Iranian CWC-related activities, the Assistant Secretary of State for Arms Control, Stephen Rademaker, told reporters that the USA had decided against a challenge because it could prove ineffective against countries determined to hide illicit weapons; and in this regard he cited the failure of UN inspectors to find such weapons in Iraq.²⁵ In June 2004 the then Under Secretary of State for Arms Control and International Security Affairs, John Bolton, had testified as follows before a Congressional subcommittee:²⁶

We believe Iran has a covert program to develop and stockpile chemical weapons. [...] Although Iran has declared a portion of its CW program to the OPCW, it is time for Iran to declare the remainder and make arrangements for its dismantlement and for the destruction of its chemical weapons.

Yet the possibility has to be recognised that Secretary Bolton may not have based his allegation of Iranian treaty violation on the best available intelligence. Newspapers have since reported that the last full-scale National Intelligence Estimate on Iranian weapons of mass destruction to have been generated by the US intelligence

²⁵ *The CBW Conventions Bulletin* no 60 (June 2003) p 49.

²⁶ Prepared statement before the House of Representatives International Relations Subcommittee on the Middle East and Central Asia, 24 June 2004; *The CBW Conventions Bulletin* no 65 (September 2004) p 39.

community was in 2001. In February 2005, its update was said to be “several months” away from completion.²⁷

There is second-order information from high-grade sources to consider in the meanwhile. This concerns the “foreign entities” referred to repeatedly, as above, by the CIA and other parts of the US government. Chinese and Russian corporations and individuals have figured particularly often in recent years, not only in CIA reports to Congress, but also in State Department announcements of the imposition of sanctions under the Iran Nonproliferation Act of 2000, the Iran-Iraq Non-Proliferation Act of 1992, and the Chemical and Biological Weapons Control and Warfare Elimination Act of 1991. Other sanctioned foreign entities include ones from Armenia, Belarus, India, Macedonia, Moldova, North Korea, Spain, Taiwan, the UAE and Ukraine.²⁸ The announcements rarely identify the types of technology with which the entities are believed to have supplied Iran, but in those that do the supplies, albeit ‘dual use’, sometimes appear applicable in nerve-gas acquisition programmes. For example, in May 1997 when several Chinese entities were sanctioned under the 1991 Act, unidentified US officials reportedly said that entities had shipped glass-lined reaction vessels to Iran as well as significant quantities of three dual-use agent-precursor chemicals on the Australia Group list, among them thionyl chloride and dimethylamine.²⁹ The sanctions necessarily carry with them a degree of penalty also for the United States -- in the form of adverse impacts both on trade and on international relations. The sheer extent to which they are being imposed therefore implies (though there could be political explanations also) an impressive degree of assurance that the United States has accurately discerned the intentions underlying the dual-use technology transactions. The same may be said for those various US operations that have been mounted to interdict technology transfers during transit. A case in point is the *Yinhe* affair of August 1993, in which US officials came to believe that a Chinese vessel sailing to Iran was ferrying tens of tons of the dual-use chemicals thionyl chloride and thiodiglycol to Iran’s chemical weapons programme; they set up a public hue and cry that resulted in inspection of the vessel in a Saudi

²⁷ Reuters from Washington DC, 13 February 2005, “US agencies updating assessments of Iran”.

²⁸ *The CBW Conventions Bulletin* no 66 (December 2004) p 45; *The CBW Conventions Bulletin* no 64 (June 2004) p 44; and *The CBW Conventions Bulletin* no 57 (September 2002) p 26.

²⁹ *The CBW Conventions Bulletin* no 37 (September 1997) pp 18-19.

Arabian port.³⁰ Other costly US interdiction projects that, again, must presumably have been rooted in intelligence-driven dual-use assessment include the exclusion of imported production plant from an agrochemical complex in the industrial city of Alborz, near Ghazvin, some 150 kilometres west of Tehran. A consortium of companies led by the German Lurgi group had been contracted to supply plant for making an organophosphate pesticide, dimethoate, but withdrew in February 1992 after heavy US representations within the Australia Group, initially resisted by the Federal German government. Early in 1989 the US government had distributed a paper entitled '*Pesticide Plant in Iran: US Views*', which reportedly said that "the plant could readily be converted to nerve gas production".³¹ It has not yet been publicly disclosed whether the US criterion of convertibility was anything more than that phosphorus pentasulfide was involved in the pesticide production process.

The government of the United States is not alone in suspecting the existence of some sort of chemical-weapons programme in Iran. In July 2004, Brigadier Yossi Kuperwasser of Israeli military intelligence told the Knesset Foreign Affairs and Defence Committee that "the possibility certainly exists" of Iran providing chemical weapons to Hezbollah.³² In June 2002, the director of the Israeli intelligence agency Mossad, Ephraim Halevy, addressed a meeting of the North Atlantic Council at which he was later reported in the Israeli press as saying that Iran had joined the CWC solely to develop a civilian chemical infrastructure that could be converted quickly to produce VX nerve gas.³³

Reliable Russian assessments are publicly available only from the period before Iran ratified the CWC. The February 1993 report on WMD proliferation published by the Russian Foreign Intelligence Service³⁴ says:

³⁰ *Chemical Weapons Convention Bulletin* no 21 (September 1993) p 27. In fact no traces of the precursor chemicals were found. See, further, James R Holmes and Andrew C Winner, "WMD: interdicting the gravest danger", *US Naval Institute Proceedings*, February 2005, pp 72-75.

³¹ Kenneth R Timmerman, *Weapons of Mass Destruction: The Cases of Iran, Syria, and Libya*, Los Angeles: Simon Wiesenthal Center, August 1992, pp 34-37.

³² *Ha'aretz* internet edition, 19 July 2004, "MI official: Iran may provide Hezbollah with chemical weapons".

³³ ['Mosad chief on nuclear threat from Iran, Iraq, Syria; terror threat'], *Yedi'ot Aharnot* (Tel Aviv), 28 June 2002, p 7, as translated from the Hebrew in FBIS, as quoted in the Nuclear Threat Initiative database www.nti.org/e_research/profiles/Iran/.

³⁴ Ye Primakov (Director, Foreign Intelligence Service of the Russian Federation), [*A New Challenge after the 'Cold War': The Proliferation of Weapons of Mass Destruction*], Moscow, 1993, as translated from the Russian by FBIS and distributed as a JPRS Report by the US Senate Committee on Governmental Affairs, 24 February 1993.

At the present time the industrial production of mustard gas and sarin has been established in Iran. A plant for the production of pesticides, which could be used as precursors in the manufacture of nerve-paralyzing and blister-producing toxic substances, operates not far from the capital. In terms of the assortment of source chemicals Iran is partially dependent on imports. The main chemical warfare munitions with which the Iranian Army is equipped are 155-mm artillery shells for American-made howitzers, 120-mm mines and chemical aerial bombs. Research is being conducted in the area of synthesizing toxic substances and the search for new physiologically active substances.

In Germany, the federal Customs Administration published in November 2004 a report about export controls and countries of concern,³⁵ which, on Iran, included the following:

Iran has an emerging chemical industry. Its CW programme obtains support, according to accounts received, from China and India. It probably possesses chemical agents such as sulfur mustard, tabun and hydrogen cyanide, possibly also sarin and VX. Iran is attempting to acquire chemical installations and parts thereof, as well as technology and chemical precursors.

Despite those “accounts received”, Germany, too, has evidently decided against initiating a challenge inspection of Iran.

The UK government, in its seventh annual report on its strategic export controls, stated in June 2004 that it had licensed exports to Iran (as well as to Libya and Russia) of “non-military toxic chemical precursors”.³⁶ This seems to imply that British export-control authorities had assessed the purposes underlying those potentially dual-use exports sufficiently carefully to exclude chemical-weapons applications, although it is possible that political or even commercial considerations had also entered into the decision-making. At no time since Iran became bound by the CWC has the UK government made any sort of public statement suggesting that Iran has an active chemical-weapons programme.

Review of information on Iranian chemical weapons contained in other sources

The National Council of Resistance of Iran (NCRI) declared in May 2003 that the Iranian Ministry of Defence has long had under its command a ‘Special Industries

³⁵ Zollkriminalamt, *Exportkontrolle Informationen sensible Länder*, November 2004.

³⁶ *The CBW Conventions Bulletin* no 65 (September 2004) pp 31-32.

Organization' in charge of arming the country with chemical (and biological) weapons.³⁷ This the NCRI had been saying since before Iran became bound by the Chemical Weapons Convention.³⁸ On such matters the NCRI attributes its information to a network of "sources within the Iranian clerical regime" afforded by an NCRI member organization, the Mujahedin-e Khalq (MEK), which was then the Iraq-based entity that became one of the US State Department's Designated Foreign Terrorist Organizations in 1997. In August 2002, NCRI identified "the 24th Bessaat Brigade" as a "chemical weapons unit of the Iranian Revolutionary Guard Corps", also alleging that an aging chemical-weapons facility near Tehran was being repaired for Parchin Chemical Industries by a Hungarian company, Lampert.³⁹ Referring to, among other things, research on VX nerve gas,⁴⁰ NCRI representatives have stated a number of times that Iranian chemical (and biological) weapons programmes intensified after Mohammed Khatami became president in May 1997.⁴¹ Even before then, according to NCRI, Iran had research, production and storage facilities for chemical weapons not only at Parchin but also at Bandar Khomeini, Karaj, Isfahan, Shiraz and Marvdasht.⁴² The MEK had told reporters in 1993 of a mustard-gas production facility at Marvdasht.⁴³ In 1985 Radio Nejat-e Iran had stated that a fertilizer plant in Marvdasht had been converted, with assistance from West German and Italian companies, to production of several types of chemical weapons, including mustard gas and a bomb containing hydrogen cyanide.⁴⁴ Mujahedin sources have spoken of a chemical bomb and warhead plant also being set up near Mahshar, in southern Iran, by the Zakaria Al-Razi chemical company.⁴⁵

Looking beyond the NCRI, there is a great mass of other published information, but of largely unknown provenance and therefore of near-zero reliability: purported leaks from unidentified officials; unsourced reports by journalists, even by academics; and undocumented information reproduced by analysts without apparent

³⁷ National Council of Resistance of Iran, press briefing in Washington DC by Soona Samsami and Alireza Jafarzadeh, 15 May 2003, transcript posted on *Iran Watch* website.

³⁸ Con Coughlin, *Daily Telegraph* (London), 14 Oct 1996, p 34.

³⁹ *Middle East Newline*, 22 August 2002, as quoted by NTI.

⁴⁰ *Jane's Defence Weekly*, 10 February 1999.

⁴¹ *The CBW Conventions Bulletin* no 43 (March 1999) p 35.

⁴² Con Coughlin, *Daily Telegraph* (London), 14 Oct 1996, p 34.

⁴³ *Chemical Weapons Convention Bulletin* no 22 (December 1993) p 12.

⁴⁴ The (clandestine) broadcasts by Voice of the Liberation of Iran on 25 March and 22 May 1985 are quoted, via FBIS, in Gordon M Burck and Charles C Flowerree, *International Handbook on Chemical Weapons Proliferation*, Westport CT: Greenwood Press, 1991, p 254.

⁴⁵ Anthony H Cordesman with G Ryan Faith, *Iran's Search for Weapons of Mass Destruction*, 7 August 2003, p 42, www.csis.org/burke/irans_search_wmd.pdf.

consideration of its quality. Some of it does not seem incredible, though much has been expressly denied by Iranian authorities. It is this literature that alleges the existence of:

- past collaboration on chemical weapons between Iran and other countries at state not simply commercial levels, including China,⁴⁶ Iraq,⁴⁷ Libya,⁴⁸ North Korea,⁴⁹ Romania,⁵⁰ South Africa,⁵¹ Sudan⁵² and Syria;⁵³
- a chemical (and perhaps biological) warhead production facility at Damghan;⁵⁴
- a large storage facility for chemical munitions (and perhaps biological ones as well) on Abu Musa island in the Persian Gulf near the Strait of Hormuz;⁵⁵
- a statement by US Defense Secretary William Cohen that Iran “may have produced up to 200 tons of VX”;⁵⁶
- possible Iranian work to develop Novichoks;⁵⁷ and

⁴⁶ *The Iran Brief*, 2 June 1997, p 9, “Iranian oil pays Chinese arms and CW.

⁴⁷ Voice of Iraqi People, clandestine radio broadcast, 1400 hrs GMT 9 September 1993, as translated from the Arabic in FBIS-NES-93-174; AFP in English 1231 hrs GMT 1 January 1991 reporting Saudi Arabian *Al-Madinah*.

⁴⁸ *Sankei Shimbun* (Tokyo), 6 January 2004, “North Korea and Iran also support Libya’s development of weapons of mass destruction”, as quoted in <www.nti.org/e_research/profiles/Iran/Chemical/>; Safa Haeri, *Independent* (London), 30 December 1987, p 1, “Iran and Libya in chemical arms for missiles deal”; Elaine Sciolino, *New York Times*, 25 September 1987, “US sends 2,000 gas masks to the Chadians”.

⁴⁹ Israeli Ambassador Arik Arazi speaking to reporters in Seoul, as reported by Voice of Israel (Jerusalem), 1900 hrs GMT 27 August 1997 as translated from the Hebrew in BBC-SWB; Joseph S Bermudez, Jr, *Jane’s Intelligence Review*, vol 5 no 5 (May 1993) pp 225-28, “North Korea’s chemical and biological warfare arsenal”.

⁵⁰ Former Romanian Defence Minister Gheorghe Tinca interviewed in *Ziua* (Bucharest), 21 June 2001, p 3, as translated in FBIS-NES-2001-0621.

⁵¹ General Knobel, evidence in the trial in Pretoria of Brigadier Wouter Basson, 23 November 1999, as reported in *The CBW Conventions Bulletin* no 47 (March 2000) pp 23-25; Brendan Seery, *Sunday Independent* (Johannesburg), 25 August 1996, “South Africa ‘exported chemical weapons technology to Middle East’”.

⁵² Sudan, Voice of the National Democratic Alliance, broadcast of 1600 hrs GMT 26 July 1998, as translated from the Arabic in BBC-SWB, 28 July 1998; MENA from Cairo in English, 0936 hrs GMT 2 February 1997; Miral Fahmy from Cairo for Reuters, 26 January 1997.

⁵³ Anthony H Cordesman, *Iran and Nuclear Weapons*, Washington, DC: CSIS, 7 February 2000, pp 35-36; Jeff Abramowitz, *Jane’s Defence Weekly*, 7 November 1987, “CW changes the rules of the Middle East war”; Bernard Gwertzman, *New York Times*, 6 June 1986, “US includes Syria in chemicals ban”; Tom Diaz, *Washington Times*, 9 December 1985, “Syria said to have offered chemical weapons to Iran”; Jack Anderson and Dale Van Atta, *Washington Post*, 2 October 1985, “Iran may turn chemical tables on Iraq”.

⁵⁴ Andrew Rathmell, with James Bruce and Harold Hough, *Jane’s Intelligence Review* Special Report no 6, released 1 June 1995, “Iran’s weapons of mass destruction”.

⁵⁵ Paula DeSutter, “Deterring Iranian NBC use”, *Strategic Forum* no 117, April 1997.

⁵⁶ Barbara Starr (from Washington DC), *Jane’s Defence Weekly*, 3 December 1997, p 6. Most probably, Iraq not Iran was meant.

⁵⁷ Richard Z Chesnoff with Douglas Pasternak, *US News and World Report*, 25 October 1999, “Mystery at a pesticide plant”, as cited in W Seth Carus, “Iran and weapons of mass destruction”, *Middle East Review of International Affairs*, vol 4 no 3 (Fall 2000) pp 57-67.

- a Turkish intelligence report dating from 2000 estimating that Iran possesses more than 500 tons of chemical weapons, mainly nerve gas but also other agents such as blood gas.⁵⁸

Where between the two extremes of source material categorized earlier – intelligence reliably reported, and NCRI public relations – does this information lie? We cannot tell, so here we should probably ignore it.

Review of information on Iranian biological weapons in high-grade sources

In November 2004 the US Congress received the following information in a statutory report from the Central Intelligence Agency:⁵⁹

Even though Iran is part of the Biological Weapons Convention (BWC), Tehran probably maintained [during the reporting period, 1 July – 31 December 2003] an offensive BW program. Iran continued to seek dual-use biotechnical materials, equipment, and expertise that could be used in Tehran’s BW program. Iran probably has the capability to produce at least small quantities of BW agents.

The previous CIA report in the series, for the period 1 January through 30 June 2003, had said much the same, but had added that it was likely that Iran had only “a limited ability to weaponize” BW agents.⁶⁰ Referring to that previous report in June 2004 Congressional testimony, the then Under Secretary of State for Arms Control and International Security Affairs, John Bolton, wrote:⁶¹

Because BW programs are easily concealed, I cannot say that the United States can prove beyond a shadow of a doubt that Iran has an offensive BW program. The intelligence I have seen suggests that this is the case, and, as a policy matter therefore, I believe we have to act on that assumption. The risks to international peace and security from such programs are too great to wait for irrefutable proof of illicit activity: responsible members of the international community should act to head off such threats and demand transparency and accountability from suspected

⁵⁸ *Milliyet* (Istanbul), 19 July 2000.

⁵⁹ USA, Central Intelligence Agency, *Unclassified Report to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions, 1 July through 31 December 2003*, released 23 November 2004.

⁶⁰ USA, Central Intelligence Agency, *Unclassified Report to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions, 1 January Through 30 June 2003*, released on 10 November 2003.

⁶¹ Prepared statement before the House of Representatives International Relations Subcommittee on the Middle East and Central Asia, 24 June 2004; *The CBW Conventions Bulletin* no 65 (September 2004) p 39.

violators while these threats are still emerging. It would be folly indeed to wait for the threat fully to mature before trying to stop it. [...] The overwhelming majority of States Parties abide by these obligations. We believe Iran is not abiding by its BWC obligations, however, and we have made this abundantly clear to the parties of this treaty. It is time for Iran to declare its biological weapons program and make arrangements for its dismantlement.

And in September 2003, the Assistant Secretary of State for Verification and Compliance, Paula DeSutter, had testified before the US-Israeli Joint Parliamentary Committee as follows:⁶²

We believe Iran probably has produced some BW agents and may have some limited capability for biological weapons deployment. Iran continues to seek dual-use materials, equipment, and expertise to assist these programs. This program is embedded within Iran's extensive biotechnology and pharmaceutical industry so as to obscure its activities.

So the principal feature of the US appraisal as thus presented is not certainty that Iran actually has capability to use biological weapons but rather that Iran “probably” wants it and is exploiting ‘dual use’ technology in order to bring that capability nearer to its reach. The 2004 and 2003 CIA reports indicated that the capability was judged still to be some way into the future, rather as the Assistant Secretary of State for Intelligence and Research, Carl Ford, had testified in March 2002:⁶³

Iran probably began its offensive BW program during the Iran-Iraq war, and likely has evolved beyond agent research and development to the capability to produce small quantities of agent. Iran may have some limited capability to weaponize BW.

Indeed, similar words had been used right back to the administration of President George H Bush:⁶⁴

The United States has determined that Iran probably has produced biological warfare agents and apparently has weaponized a small quantity of those agents.

⁶² Paula DeSutter [Assistant Secretary of State for Verification and Compliance], *Iranian WMD and Support of Terrorism*, testimony before the US-Israeli Joint Parliamentary Committee, 17 September 2003, as posted at: www.state.gov/t/vc/rls/rm/24494.htm.

⁶³ Carl Ford [Assistant Secretary of State for Intelligence and Research], prepared statement before the US Senate Foreign Relations Committee during its hearing on *Reducing the Threat of Chemical and Biological Weapons*, 19 March 2002.

⁶⁴ The White House, Office of the Press Secretary, release of 19 January 1993, “Text of a letter from the President to the Speaker of the House of Representatives and the President of the Senate”.

Singularly detailed accounts by both the CIA and the Defense Intelligence Agency were presented in open testimony to the US Senate in May 1996. The CIA wrote:⁶⁵

Iran has had a biological warfare program since the early 1980s. Currently, the program is mostly in the research and development stages, but we believe Iran holds some stocks of BW agents and weapons. For BW dissemination, Iran could use many of the same delivery systems -- such as artillery and aerial bombs -- that it has in its CW inventory. We are concerned that in the future Iran may develop a biological warhead for its ballistic missiles, but we would not expect this to occur before the end of the century. Tehran most likely has investigated both toxins and live organisms as BW agents. Iran has the technical infrastructure to support a significant BW program and needs little foreign assistance. It conducts top-notch legitimate biomedical research at various institutes, which we suspect provide support to the BW program. Because of the dual-use nature of biomedical technology, Iran's ability to produce a number of both human and veterinary vaccines also gives it the capability for large-scale BW agent production.

The DCI Nonproliferation Center reproduced most of this text in open Congressional testimony four years later,⁶⁶ removing, however, the suggestion that Iran needed “little foreign assistance” and adding the following:

Tehran is expanding its efforts to acquire biotechnical materials, equipment, and expertise from abroad - primarily from entities in Russia and Western Europe. [...] Tehran continues to develop its BW capability despite being a party to the Biological Warfare Convention.

That long-sustained charge of BWC violation implies that the USA has evidence, not mere supposition, of ‘dual use’ capacity being deliberately acquired in order to support break-out. Asked what the evidence might be by reporters during the Fifth BWC Review Conference in November 2001, Secretary Bolton responded:⁶⁷

⁶⁵ 104th US Congress, 2nd session, Senate, Select Committee on Intelligence, hearing, 22 February 1996, *Current and projected national security threats to the United States and its interests abroad*, S. Hrg. 104-510, Washington, DC: US Government Printing Office, 1996, p 82.

⁶⁶ A Norman Schindler [Deputy Director, DCI Nonproliferation Center], “Statement on Iran's weapons of mass destruction programs to the International Security, Proliferation and Federal Services Subcommittee of the Senate Governmental Affairs Committee”, 21 September 2000, as posted at www.odci.gov/cia/public_affairs/speeches/schindler_WMD_092200.htm.

⁶⁷ US Mission Geneva, “Transcript of press briefing by the Honorable John R Bolton, Under Secretary of State for Arms Control and International Security, US Department of State at the Palais des Nations Geneva, Switzerland November 19, 2001”.

I don't feel the need to clarify [the charges of BWC non-compliance he had just made against Iraq, North Korea, Syria and Sudan as well as Iran] because our information we believe is sufficient to justify the statements that I made here publicly and many others that we've made in classified fashion to Congress and to other friends and Allies.

There is some second-order information on intent. In January 2003, the CIA had informed Congress.⁶⁸

Foreign dual-use biotechnical materials, equipment, and expertise, primarily, but not exclusively, from entities in Russia and Eastern Europe continued to feature prominently in Iran's procurement efforts. Such materials have legitimate uses, but Iran's [BW] program also could benefit from them.

Those "entities" had been the subject both of US diplomatic action, as in the case of Armenian fermenter sales to Iran⁶⁹ and of similar Chinese sales,⁷⁰ and also, it seems, sanctions under US antiproliferation laws.⁷¹

In appraisals expressed no more certainly than those of the US government, other governments have stated suspicions of Iranian biological-weapons programmes. In Russia, the report on WMD proliferation that the Foreign Intelligence Service published in February 1993 contained the following:⁷²

Iran does not have offensive biological weapons as of this time. But it is possible to speak confidently of the presence of a military-applied biological program. According to certain data, scientific research has been performed in Iran for approximately three years. An initial program of research, development and purchases in the sphere of biological weapons has been approved. It cannot be ruled out that small stocks of biological agents have already been created.

Western countries have recorded attempts by Iranian representatives to purchase

⁶⁸ USA, Central Intelligence Agency, *Unclassified Report to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions, 1 July Through 31 December 2001*, released on 7 January 2003.

⁶⁹ Arminfo from Washington DC, 0850 hrs GMT 6 July 2002, as translated from the Russian in BBC-WWM, 6 July 2002, "USA trusts its source on Armenian arms supplies to Iran – State Department".

⁷⁰ *Chemical Weapons Convention Bulletin* no 35 (March 1997) p 35.

⁷¹ Richard Boucher [Spokesman, US State Department], "US sanctions Chinese and Indian entities for proliferation violations", 24 July 2002, <http://usinfo.state.gov/regional/ea/uschina/chinawep.htm>.

⁷² Ye Primakov (Director, Foreign Intelligence Service of the Russian Federation), [*A New Challenge after the 'Cold War': The Proliferation of Weapons of Mass Destruction*], Moscow, 1993, as translated from the Russian by FBIS and distributed as a JPRS Report by the US Senate Committee on Governmental Affairs, 24 February 1993.

unofficially equipment and biological material suitable for the production of biological weapons, mycotoxins particularly.

In June 1999, the head of the Biological Defence Department of the Russian Ministry of Defence, Lt-Gen Valentin Yevstigneyev, suggested in interview that the current strategy of Iran on biological weapons was, like that of Iraq, “bluff aimed at blackmailing the international community”; most likely neither country has “any biological weapons but their political hierarchy is well aware of the benefits of making a stir about this issue”.⁷³

In Germany, the November 2004 report of the federal Customs Administration about export controls and countries of concern included the following:⁷⁴

Iran has had years of experience in the biotechnological sector, thus it has the necessary know-how to conduct a biological weapons programme. This programme is thought to be in the research and development stage. The research is partly being conducted at small university laboratories. Efforts are being made by Iran to acquire microbiological and biotechnological laboratory and production equipment (e.g. fermenters, centrifuges, freeze-dryers, separators), as well as biological material, e.g. bacterial and fungal strains and toxins.

In Britain, the Ministry of Defence responded as follows to a written Parliamentary question in October 1996:⁷⁵

Iran has a developed biotechnology industry which would be capable of sustaining a biological warfare research programme. For this reason, it is cause for concern that Iran, though a state party to the biological and toxin weapons convention since 1973, has not offered to submit to the UN centre for disarmament affairs any confidence-building and transparency declarations.

In March 2002, the Ministry told the House of Commons Defence Committee that Iran was “capable of producing biological weapons”.⁷⁶ Yet a year later there was no mention of Iran in that part of the Ministry’s Joint Doctrine and Concepts Centre

⁷³ *Yaderny Kontrol (Nuclear Control) Digest* [Moscow: PIR-Center for Policy Studies in Russia] no 11, Summer 1999, pp 43-51, “Interview [by Dmitry Litovkin]: Valentin Yevstigneyev on issues, relating to Russian biological weapons”, internet version posted 4 June 1999.

⁷⁴ Zollkriminalamt, *Exportkontrolle Informationen sensible Länder*, November 2004.

⁷⁵ *Hansard (Commons)*, daily part, vol 282 no 146, part 1 of 2, col 859, written answers, 15 October 1996, Mr Soames [Minister of State for the Armed Forces] for the Defence Secretary to Mr Llew Smith.

⁷⁶ UK Ministry of Defence, “Supplementary memorandum from MoD on the ballistic missile threat”, March 2002, as posted at <www.parliament.the-stationery-office.co.uk/pa/cm200102/cmselect/cmdfence/644/2032002.htm>.

publication, *Strategic Trends*, which addressed “weaponised capability” for biological warfare over the period 2000-2030. China, Iraq, North Korea and Russia are all said to have had such a capability since at least 2000, but only India, Israel, Libya, Pakistan and Syria are projected as also acquiring, “[i]n the absence of workable counter-proliferation arrangements”, the capability, which they are shown in an accompanying graphic as doing by 2015.⁷⁷ This apparent change in the UK assessment may perhaps also be explained by inadequate coordination within the Ministry of Defence.

In Sweden, where the government seems not have taken any sort of public position on whether Iran does or does not have biological (or chemical) weapons programmes, the NBC Defence division of the Swedish Defence Research Agency (FOI) published, in December 2003, a detailed study of what can be learned about any such programmes from open sources of information.⁷⁸ What sets this FOI work apart from most other such studies (including the present one) is its close examination of particular Iranian ‘dual use’ capacities, especially the Iranian vaccine industry and, following on from an earlier Canadian inquiry,⁷⁹ Iranian research on particular toxins and microbial pathogens. This examination is informed by an introductory review of particular allegations of how Iran has supposedly been abusing its dual-use capacity. For example, the FOI review describes the reports of Iran hiring former Soviet bioweapons specialists; it considers what is known about individual facilities in Iran that the NCRI had in 1999 named for involvement with biological weapons; and it provides perspective on Iranian cooperation in biotechnology with Cuba, China, India and Russia. The FOI study concludes, rightly, that “[o]pen source information cannot unambiguously answer the question whether or not a state has offensive BCW programmes”.

⁷⁷ UK Ministry of Defence, Joint Doctrine and Concepts Centre, *Strategic Trends*, 10 March 2003, as posted at < www.jdcc-strategictrends.org/Pages/st_frames.asp?view=dim&dim=7&id=0>.

⁷⁸ Kristina S Westerdahl, Roger Roffey, Karin Hjalmarsson, Göran Bucht, Jean Pascal Zanders and John Hart, *Iran’s Disarmament and Arms Control Policies for Biological and Chemical Weapons, and Biological Capabilities*, Umeå: Swedish Defence Research Agency, December 2003, report FOI-R—0904—SE.

⁷⁹ Canada, *Collateral Analysis and Verification of Biological and Toxin Research: A Second Case Study*, November 1992, distributed via document BWC/CONF.III/VEREX/WP.100.

Review of information on Iranian biological weapons contained in other sources

In May 2003, the US representative of the NCRI, Soona Samsami, spoke as follows at a press conference in Washington, DC:⁸⁰

The activities of the clerical regime with respect to acquiring biological weapons began in 1985, during the Iran-Iraq War. In 1985 and 1986, the regime established a secret research complex in Teheran's Pasteur Institute to work on toxic fungus and microbial substances. The center succeeded in producing toxic fungus, including aflatoxin. At the same time, similar research was being undertaken at Vira Laboratory[...]. In subsequent years, as the regime succeeded in mass production of microbial material, it moved the production centers to a military facility. Centers such as Pasteur Institute are now being used for research purposes.

Under then-President Rafsanjani, these activities took on new dimensions in the 1990s. The regime originally imported fermenters from European countries, particularly France and Switzerland. Due to international restrictions and major needs on the part of the regime, domestic production of fermenters was put on the agenda.

In June 2001, a plan called Comprehensive National Microbial Defense Plan was adopted by the Supreme National Security Council chaired by Khatami. A senior cleric, Hassan Rowhani, the SNSC secretary, personally pursued the implementation of this plan and reported directly to Khamenei, the supreme leader. In addition to the principal members, the relevant ministers and competent officials from the armed forces command headquarters also took part in that SNSC meeting. The Comprehensive National Plan for Microbial Defense is prepared in four pages and kept in the secretariat of the SNSC. It contains an introduction and specific task of each ministry. On the basis of this plan, the biological weapons capacity of the regime must be increased three-fold in the next two years.

The biological weapons activities are centred around the following elements:

- *anthrax, produced at the Revolutionary Guard Imam Hussein University in Teheran;*
- *next, aflotoxin [sic], also produced at the Imam Hussein University;*
- *production of microbial bombs using anthrax;*

⁸⁰ National Council of Resistance of Iran, press briefing in Washington DC by Soona Samsami and Alireza Jafarzadeh, 15 May 2003, transcript posted on *Iran Watch* website.

- *production of microbial bombs using smallpox virus;*
- *production of microbial bombs using typhoid fever;*
- *production of microbial bombs using high dosage of aflatoxin [sic];*
- *production of microbial bombs using plague microbes;*
- *production of microbial bombs using chloromicrobes [sic].*

Genetic cloning or alteration is being carried out at Malek Ashtar University, which is headed by Maqsudi, the head of Center for Scientific and Growth Technology.

Further details followed this introductory statement as the press conference continued.

Next day the NCRI conducted similar press conferences in London and Berlin.⁸¹

Much of what was said had in fact appeared in earlier NCRI communications, including reference to a prominent part being played by the Razi Serum and Vaccine Production facility.⁸²

Just as described above for chemical weapons, there is, beyond these NCRI allegations, much additional published information regarding Iranian biological weapons. Most is of largely unknown provenance, and therefore unreliable, though none of it is necessarily incredible. It is this literature that alleges the existence of:

- recurrent Iranian attempts at recruiting people who once worked in the biological-weapons programme of the old Soviet Union;⁸³
- Israeli intelligence on several features of Iranian bioweapons work, including information that “military scientists working for the Islamic regime in Tehran have developed a deadly BW aerosol [*sic*] that can be carried by a terrorist”;⁸⁴
- Iranian aspiration to achieve biological warheads for long-range missiles, the development of such warheads having been “completed recently”;⁸⁵

⁸¹ “Iranian resistance reveals Mullahs’ secret biological weapons program”, *Iran Liberation* no 171, 19 May 2003.

⁸² “NBC capabilities, Iran”, in *Jane’s NBC Defence Systems 1998-1999*, Jane’s Group, 1998.

⁸³ James Adams (from Washington), *Sunday Times* (London), 27 August 1995, p 14, “Russia helps Iran’s biowarfare”; Judith Miller and William J Broad (from Moscow), *New York Times*, 8 December 1998, pp A1 & A12, “Bioweapons in mind, Iranians lure needy ex-Soviet scientists”; Ken Alibek, interviewed in Al J Venter, *Jane’s Defence Weekly*, 28 April 1999, p 63, “Spectre of biowar remains”; Michael Dobbs, *Washington Post*, 12 September 2000, “Soviet-era work on bioweapons still worrisome”.

⁸⁴ Uzi Mahnaimi (from Tel Aviv) and James Adams (from Washington), *Sunday Times* (London), 11 August 1996, p 14, “Iran builds biological arsenal: Israelis warn of Tehran plan to poison Europe’s water supplies”.

⁸⁵ Dany Shoham, “The chemical and biological threat to Israel”, in Arie Stav (editor), *Ballistic Missiles: The Threat and the Response*, London: Brassey’s, 1999, pp124-48, at p 137. See also: Dany Shoham, “The chemical and biological threat of Islam”, in David Bukay (editor), *Muhammad’s*

- evidence implicating two Chinese corporations in the transfers to Iran of BW-related goods that resulted in their sanctioning under US antiproliferation legislation in July 2002,⁸⁶ the transfers possibly being associated with a project to arm Iran's Shihab-3 intermediate range ballistic missile with biological or chemical warheads;⁸⁷
- possible Iran-Syria collaboration on the development of biological/chemical warheads for the Scud C missile;⁸⁸ and
- a Turkish intelligence report dating from 2000 stating that production of biological-warfare material is proceeding in nine factories in the northern and western regions of Iran with technical support from China, India and North Korea.⁸⁹

Conclusion

What should be made of the disturbing information on biological weapons outlined in the previous section? As with the corresponding information on Iranian chemical weapons, its unreliable (but not incredible) quality means that it ought to be disregarded, ignored. The chief reason for not having done so – for having noted information that does not satisfy the criterion of reliability on which this assessment has been based -- is the light such information may nevertheless cast on the official public disclosures reviewed here of governmental, mainly US, intelligence, and particularly on the inflexions discernible in them over the years. The official disclosures are thin and uncertain in their content, and fail to display evidence of data-analysis competently conducted. So there could be benefit in considering even low-grade supplementary information.

Yet the end-result is disappointing, unsatisfactory for anyone wanting to know whether there is significant divergence between the executive policies of Iran on chemical and biological weapons and the declared Iranian policies. There may indeed

Monsters, Green Forest AR: Balfour Books Inc, 2004, pp 255-79, at p 266; Dany Shoham, "Image vs reality of Iranian chemical and biological weapons", *International Journal of Intelligence and Counterintelligence*, vol 18 no 1 (January-March 2005) pp 89-141.

⁸⁶ Bill Gertz, *Washington Times*, 26 July 2002, "Firms in arms sales to Iran identified".

⁸⁷ WorldTribune.com from Washington, 20 May 2002, "China defies US sanctions for tech transfers to Iran".

⁸⁸ Anthony H Cordesman, *Iran and Nuclear Weapons*, Washington, DC: CSIS, 7 February 2000, pp 35-36.

⁸⁹ *Milliyet* (Istanbul) online edition, 19 July 2000, "[Missile threat from Iran]", as translated from the Turkish by FBIS.

be grave contradiction between the statements and the reality, but none of us, it seems, can either prove or disprove it, though some have confidently asserted it.⁹⁰ Disparity in the two broad sources of Iranian state policy, which is to say the political leadership on the one hand and the religious hierarchy on the other, may itself introduce contradiction into successive statements of policy. The more fundamental obscurity, however, and one that perhaps afflicts our view of Iranian preparedness for biological warfare even more than that for chemical warfare, stems from the ambivalence of ‘dual use’—an ambivalence that may induce misperception on the part of foreign observers or else provide means for deceiving them, and may, in any case, cloak an accumulation of technology that could, if demand became compelling, be used for rapid break-out from a declared posture of biological or chemical disarmament. Procurement-network analysis and related techniques might serve to resolve the ambiguities, but their effective application requires data to be found, if at all, only within the intelligence community.

⁹⁰ Notably Giles *op cit* (footnote 19) and Shoham *op cit* (footnote 85). The most recent of the Shoham citations presents both conjecture and an unrivalled amount of detailed information on Iranian programmes, but, although it is closely documented, the reliability of its cited sources is rarely easy to discern. Giles presents a lengthy account mostly of Iranian chemical-warfare capability based on carefully cited open sources but also, occasionally, on undocumented and therefore unreliable information. Like Shoham, Giles arrives at strong conclusions, for example on Iranian command and control: “Already a gap exists between civilian leaders, who largely see nuclear, biological, and chemical weaponry as a deterrent and the [Islamic Revolutionary Guard Corps], which is preparing to use chemical and possibly biological weapons offensively against U.S. naval forces in the Persian Gulf.”