Introduction

The years since the US invasion of Iraq have witnessed a decline in public confidence in the US Intelligence Community's ability to understand and report on the proliferation of weapons of mass destruction (WMD) and in US policymakers' capacity to deal effectively with proliferation. Negative reactions to the US government's decision to use military force to remove the Saddam regime—which the administration stated was partly intended to eliminate Iraq's WMD programs—along with the lack of significant proof of the existence of such weapons, resulted in much acrimony and severe criticism of the Intelligence Community's ability to monitor accurately Saddam's clandestine efforts to produce or acquire nuclear, chemical, or biological weapons.

During this same period the Intelligence Community has been unable to judge definitively whether North Korea has an ongoing, clandestine uranium enrichment program, which could circumvent a shutdown of Pyongyang's plutonium weapon program. More recently, questions regarding Iran's efforts to develop nuclear weapons have been raised after the Intelligence Community, in a National Intelligence Estimate issued in late 2007, changed one of its Key Judgments on the status of Iran's nuclear weapon program. These episodes, especially Iraq (see Chapter 5), illustrate the confluence of intelligence and the world of politics in most foreign and national policies; furthermore, intelligence is often blamed for policy failures. Clearly, US intelligence on proliferation issues has sometimes been faulty, as in the case of Iraq's chemical and biological weapons programs in 2002. In the arena of nuclear weapon proliferation, however, the track record shows that intelligence has gotten it right more often than not, even to some degree in the case of Iraq (see Chapter 3).

Limiting the proliferation of nuclear weapons and other weapons of mass destruction and preventing their use is a top priority for the United States and the world community in the twenty-first century. With respect to nuclear

weapons, this priority involves our national survival as surely as containing the Soviet nuclear threat did during the Cold War. The urgency is apparent in the amount of US and international effort in dealing with India, Pakistan, Libya, North Korea, Iraq, and Iran in the post–Cold War world.

However, the discussion of policy and intelligence interaction concerning WMD proliferation and of understanding the weapons themselves is often confusing and misleading. First, criticisms of the Intelligence Community often fail to take into account either the complex bureaucratic processes within the Intelligence Community that are designed to produce accurate and objective assessments or the interactions between the Intelligence Community and policymakers, who are responsible for formulating appropriate actions. The dynamics of these interactions are critical to successful policy-making, and the distinction between policy and intelligence must be understood (see Chapter 4). The best summary of how this bureaucratic process should work is contained in *Intelligence: From Secrets to Policy* by Mark Lowenthal. We add our perspective in the present book on how the intelligence-policymaker relationship generally unfolds to clarify the important distinctions between the roles and responsibilities of intelligence and policy. Using the Iraqi WMD episode as a case study (Chapter 5), we explain what can happen when the lines become blurred and the bureaucratic processes are corrupted.

Second, given the various types of weapons of mass destruction, important distinctions pertain to what is required for potential proliferators to develop, produce, acquire, and use them (for a discussion of the technical differences among WMD, see Appendix B). These distinctions complicate the challenges the United States and the international community face in monitoring and limiting proliferation. We hope to make clear the implications of these distinctions and describe the complexities in monitoring such weapons and limiting their proliferation, including within terrorist organizations. Suffice it to say here that it is the threat from nuclear weapons which rightly instills the greatest concern, as was evidenced in how US policymakers portrayed the potential threat of Iraqi WMD programs prior to March 2003 (see Chapter 5).

At least seven factors play into an analysis of clandestine efforts to obtain weapons of mass destruction, especially nuclear weapons. First, historical context is important for understanding the aspirations and motives of a country (or a terrorist group) seeking such weapons. Has a country been the user, or victim, of such weapons in the past, or is there a prevailing desire to achieve a particular status within a region or in the world community, which the pos-

What Are Weapons of Mass Destruction?

Insufficient care is generally taken to distinguish types of weapons. The term *weapons of mass destruction* is often misunderstood and used as a synonym for nuclear weapons. Almost always, however, *WMD* refers to nuclear, chemical, and biological weapons. It may also cover the means of delivery (missiles, aircraft, etc.). In the context of terrorism, of course, the means of delivery may be an individual person.

Nuclear bombs truly are weapons of mass destruction with their huge destructive power of blast, heat, and irradiation. Chemical weapons, however, are normally viewed by military planners as tactical or battlefield weapons. They can affect only a relatively small area although, like nuclear weapons, their effects are immediate. Biological weapons are unique in that they may have only a delayed impact, which allows the agents to be spread far.

Chemical and biological weapons are often referred to as the poor man's nuclear weapon because the infrastructure to produce them is cheaper and more easily obtained and concealed than that for nuclear weapons. Chemical and biological agents might more appropriately be called weapons of mass terror and casualties, rather than destruction. Chemical weapons have been used numerous times in tactical warfare and by terrorists, and US and Soviet militaries studied ways to militarize biological agents. In the hands of terrorists, of course, any of the three types of WMD, but especially nuclear weapons, would create panic and havoc.

Finally, weapons of mass destruction of any type not only require the critical ingredients (chemical agents, biological agents, or fissile nuclear material, which have to be stolen or produced), but they must also be weaponized (made to explode or be dispersed) and transported (perhaps by only a single human being, in the case of terrorists) to their intended targets. Thus, a whole system must be devised for such weapons to be useful.

session of the weapons will make possible? That India, Pakistan, Israel and, at least initially, South Africa refused to sign the Nuclear Non-Proliferation Treaty raised suspicions that each wanted to preserve the option to have nuclear weapons. All four eventually exercised that option. Second, what are the intentions of the leaders of such a country or a terrorist group? What do they hope to achieve through the acquisition of such weapons? Third, what actions of a country have raised suspicions? Has it been caught circumventing its obligations under an international treaty or convention that limits or bans the

weapons? The difficulty of discerning between legal and illegal nuclear activities increases with the existence of civilian facilities, expertise, and enrichment or reprocessing capabilities, which can mask weapon program activities. Similarly, chemical and biological agents can be produced using legitimate civilian fertilizer or pharmaceutical laboratories. Even benign assistance in the field of nuclear technology for legitimate purposes, such as for research or power reactors, can lead to the clandestine use of nuclear expertise and material to develop weapons. Fourth, what industrial and resource base does a particular country have for the acquisition, production, and delivery of such weapons? Intentions may change from time to time within a country, but capabilities generally only improve. Fifth, what supply networks are available, whether they involve nation-states trying to sell expertise and technology or black-market efforts to peddle dangerous information, expertise, or materials to rogue states or terrorist organizations? Sixth, do relationships exist between certain countries and international terrorist organizations that might cause the countries to transfer weapons of mass destruction, or associated technologies, to such organizations? Finally, are certain countries particularly vulnerable to rogue operations or theft, which would put weapons of mass destruction or dangerous materials in the hands of terrorists? All of these factors, along with the capabilities of potential proliferators to deploy such weapons, must be examined by the Intelligence Community and communicated clearly to policymakers, who then gain an appreciation for the intentions, capabilities, and potential threat of any clandestine proliferation effort. (One of the more comprehensive reviews of international WMD proliferation efforts is *Deadly Arsenals: Nuclear, Biological, and Chemical Threats* by Joseph Cirincione.)

Before we can adequately explore the Intelligence Community's effort to understand and report on proliferation efforts, such as the amount of progress Saddam's regime had made in reconstituting its WMD programs prior to 2003, it will be important to explain in a bit of detail the dynamic relationship between intelligence and policymaking in the United States. Therefore, after a review of the significant differences among the various types of weapons of mass destruction and the reasons that countries and terrorist groups seek nuclear, chemical, or biological weapons capabilities (Chapter 1), a discussion of the challenges we face in detecting and monitoring clandestine WMD programs (Chapter 2), and an examination of the record of the US Intelligence Community in monitoring nuclear, biological, and chemical proliferation activities (Chapter 3), we explain the proper role of intelligence and how it supports and

interfaces with policy efforts to thwart proliferation activities (Chapter 4). The discussion should provide readers with a better understanding of what, and how, US intelligence reported in the case of Iraq, as well as how its judgments were used (Chapter 5). Finally, this book describes the tools, both national and international, available to the United States in its efforts to limit and, if possible, reverse proliferation activities (Chapter 6). We hope this book will provide some lessons and a better appreciation for what will be involved in future efforts to monitor and inhibit the proliferation of clandestine WMD programs.