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Iran-Iraq: Ballistic Missile Warfare and Its Regional Implications

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An Intelligence Assessment

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NESA 86-10013C
SC 00394/86
March 1986

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Iran-Iraq: Ballistic Missile Warfare and Its Regional Implications




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An Intelligence Assessment

This paper was prepared by 
 Office of Near
Eastern and South Asian Analysis. It was
coordinated with the Directorate of Operations. (u)

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Comments and queries are welcome and may be
directed to the Chief, Persian Gulf Division, NESAs,
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**Iran-Iraq:
Ballistic Missile Warfare and
Its Regional Implications** [redacted]

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Key Judgments

*Information available
as of 6 January 1986
was used in this report.*

The use of surface-to-surface missiles in the Iran-Iraq war foreshadows an increasing reliance by both countries on these weapons to help achieve regional dominance. The lack of a defense against missiles and their ability to hit targets throughout the Middle East will encourage Tehran and Baghdad to acquire large numbers of more sophisticated missiles. The missiles' advantages as a delivery system will probably lead the two countries to try to develop chemical warheads in the next few years and nuclear warheads in the late 1990s. [redacted]

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Iran and Iraq have fired Soviet-made Scud and FROG-7 missiles at each other to weaken civilian morale and to disrupt military and economic activities. Although the small warheads and inaccuracy of these weapons have limited their effectiveness, missiles will continue to play a part in both sides' war strategy:

- They will fire additional missiles against each other's cities in retaliation for renewed attacks on civilian targets.
- Iran may use most of its limited supply of missiles against Baghdad during a major ground offensive in an effort to disrupt Iraqi military command and control and to undermine civilian morale.
- Tehran could also use missiles to threaten or punish the Arab Gulf states for their support of Iraq if Iran suffers a serious setback in the war.
- If Baghdad develops chemical warheads for its missiles, it probably will use them to disrupt any Iranian offensive that threatens to inflict a major defeat on Iraq. [redacted]

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After the war, when Iraq has acquired missiles with a long range such as the Soviet SS-12, improved Scud, or Brazilian Sonda, Baghdad will use the threat of missile strikes, especially with chemicals in the late 1980s or nuclear warheads developed in the late 1990s, to help deter future Iranian aggression. The improved Scud or other new, longer range missiles also will give Iraq a deterrent against Israel, although the likelihood of Israeli retaliation will make Baghdad reluctant to employ them. Iran hopes missiles will deter aggression by Iraq, the USSR, and Israel, although it does not have rockets that can reach Israel. Israel probably would not launch preemptive strikes on Iraqi long-range missiles; it has not attacked similar systems in Egypt or Syria. If Israel determined that Iraq was again attempting to build nuclear weapons, it probably would strike nuclear development facilities rather than try to destroy missile launchers. [redacted]

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SC 00394/86
March 1986

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Increasing Iraqi missile capabilities probably will not pose a threat to US forces in the Middle East in the short term because of Baghdad's fear of provoking US retaliation or intervention. In the 1990s, however, Iraq will view its growing missile power, especially with chemical and nuclear warheads, as a deterrent to superpower intervention in the region. Even then, we judge that the prospect of extensive US retaliation against Iraq would make Baghdad reluctant to carry out its threats. 

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US forces in the Persian Gulf are likely to face a greater danger from Iranian missiles than from Iraqi missiles because of the likelihood of continuing, strong Iranian hostility toward the United States. Fear of a US attack or even an increase in the US presence in the Gulf probably would deter Iran from launching a surprise or unprovoked attack on US forces. In the event of US-Iranian hostilities, Tehran might attempt retaliatory attacks with missiles, perhaps on US naval facilities in Bahrain. Iran's perception that its missile forces were helping to curtail US military activity in the Gulf also might make Iran less reluctant to restrict passage through the Strait of Hormuz. 

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Contents

	<i>Page</i>
Key Judgments	iii
Iraq	1
Strategy and Operations	1
Effectiveness	1
Capabilities	4
Development and Acquisition	4
Iran	7
Strategy and Operations	7
Effectiveness	7
Capabilities	7
Development and Acquisition	7
Future Use of Missiles in the Iran-Iraq War	8
Long-Term Regional Implications	12
Postwar Mutual Deterrence	12
Intimidation of the Gulf States	12
Threats to Israel	12
Iranian Deterrence of the USSR	15
Implications for the United States	16

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Figure 1
Iraqi Scud Missile Deployment and Coverage



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[Redacted]

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**Iran-Iraq:
Ballistic Missile Warfare and
Its Regional Implications**

[Redacted]

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During the past five years, Iraq and Iran have engaged in sporadic attacks against military and civilian targets using FROG-7 and Scud missiles. Although these operations have had only marginal effects, the range of the missiles and their ability to penetrate air defenses have encouraged Baghdad and Tehran to continue their use. [Redacted]

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Iraq

Strategy and Operations. Baghdad's strategy, according to Iraqi press statements, is to use missile attacks against Iranian cities primarily to weaken civilian morale and foment opposition to the clerical regime in Tehran. This was evident in early 1985, when the Iraqis said they would cease attacks on the city of Borujerd because of civilian demonstrations there against Iran's war policy. The Iraqis sometimes fire several missiles into the same area—tending to support Iranian claims that Iraq tries to kill civilians who gather where the first missile hit. [Redacted]

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Baghdad's missile attacks on Iranian cities also are launched in retaliation for Iranian activities against Iraq. Iranian press reports indicate that over 40 percent of Iraq's missile attacks occurred in the spring of 1985 after Iranian air and artillery attacks on Iraqi cities. [Redacted]

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[Redacted]

During this period, Iraq also fired Scud missiles at a number of Iranian cities. [Redacted]

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[Redacted] the Iraqis launched missiles against Iranian cities in response to terrorist attacks in Baghdad. The Iraqis probably believe that retaliation with missiles is a dramatic way to bolster Iraqi civilian morale and dispel any impression that Iraq is unwilling or unable to respond to Iranian pressure. [Redacted]

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The Iraqis have fired a smaller number of missiles—particularly FROG-7s—at military and economic targets. Iraqi commanders apparently use the FROG-7, instead of vulnerable fighter aircraft, to attack some targets in the Iranian rear. [Redacted] Iraqis have launched these missiles against defensive strongpoints, concentrations of troops and vehicles, command and control bunkers, and air defense missile sites. Iraq fired a long-range Scud at Jazireh-ye Khark (Khark Island) in October 1982. [Redacted]

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Effectiveness. We estimate that Iraq has fired at least 177 surface-to-surface missiles since the war began in late 1980. These attacks have killed at least 1,400 civilians and wounded another 6,400, according to Iranian press reports. The highest losses were inflicted between March and June 1985, when missiles killed or wounded more than 3,000 people. According to Iranian press accounts, a single missile killed as many as 33 people and wounded 100 more in Dezful, and a barrage of four Scuds killed 110 and wounded 1,000 in Bakhtaran. At least 19 Iranian cities have been hit, with Dezful suffering the most damage, according to the Iranian media. [Redacted]

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[Redacted] Iraqi air and missile attacks contributed to antiwar demonstrations in some Iranian cities in 1985, but the Scud missiles now in Iraq's inventory lack the range to hit Tehran, where unrest would have the best chance to influence Iranian political leaders. We believe that the Iraqis have not targeted any city long enough to

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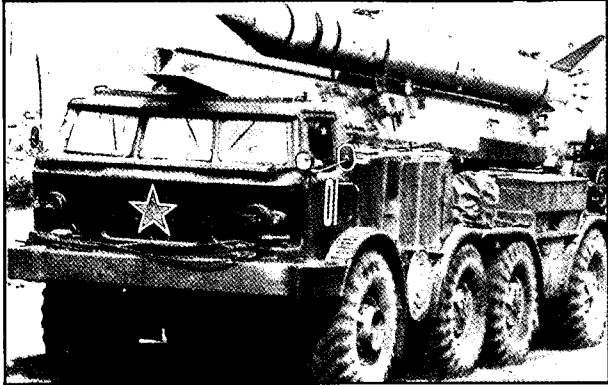
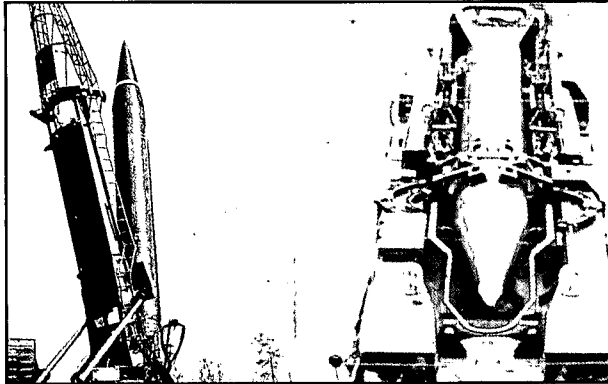
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Figure 2
Iraq and Iran:
Surface-to-Surface Missiles

	Maximum Range (kilometers)	Warhead Weight (kilograms) ^a	Accuracy ^b (meters)
	70	430	400
<p>FROG-7</p> <p>Missile on truck transporter</p>			
	300	1,000	500-900
<p>Scud-B</p> <p>Missile in firing position (left) and in transport position on truck transporter (right)</p>			

^a High-explosive warhead.

^b At two-thirds maximum range with 50 percent of the warheads impacting within a circle with the radius.

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[Redacted]

[Redacted]

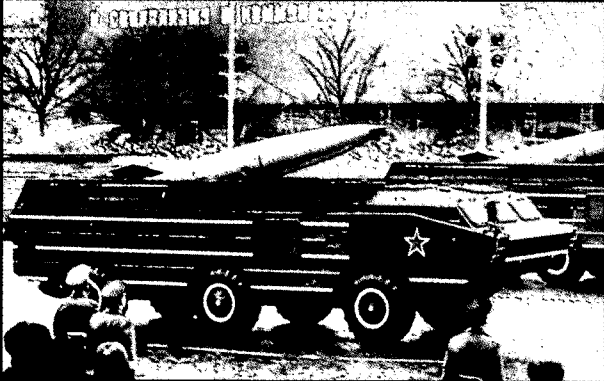
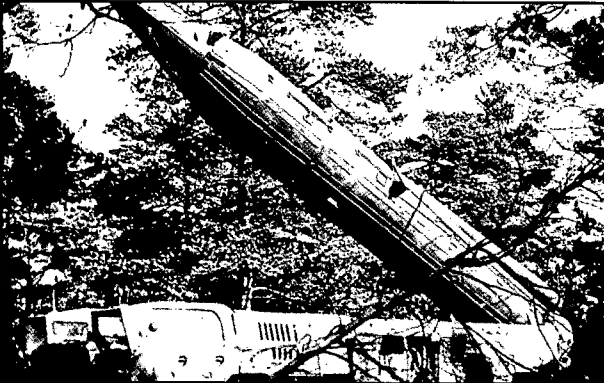
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	Maximum Range (kilometers)	Warhead Weight (kilograms) ^a	Accuracy ^b (meters)
 <p>S-21 ^c</p> <p>Missile on truck transporter</p>	100	500	50-100
 <p>SS-12 Mod 1 ^c</p> <p>Scaleboard missile being raised into firing position on track transporter</p>	925	1,000	600-900

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[Redacted]

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keep morale depressed. Iranian civilians apparently have become resigned to occasional missile attacks as part of the war. The Iranian regime has used the attacks to foster hatred of Iraq by claiming that the missiles have indiscriminately killed women and children and damaged or destroyed hospitals and mosques. [Redacted]

[Redacted]

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Iraqi attacks against military and economic targets appear to have inflicted little damage, despite the large number of rockets fired at some targets. The inaccuracy of both Scuds and FROGS and the relatively small destructive power of their high-explosive warheads have severely limited the missiles' effectiveness against such targets. [Redacted]

[Redacted]

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[Redacted] the Scud fired at Khark Island in 1982 caused no damage and probably missed the island. Similarly, FROG-7 attacks aimed at airfields, troop concentrations, or dikes (to flood Iranian positions) usually have failed to hit their targets. [Redacted]

Capabilities. Since first acquiring long-range rockets from the Soviet Union in 1976, Iraq has built one of the largest missile forces in the region and gained valuable operational experience during the war with Iran. [Redacted]

Development and Acquisition. We expect the Iraqis to continue to ask the Soviets for additional and more advanced missiles. If Moscow refuses, we believe that Iraq will turn to Brazil, Argentina, and India. [Redacted]

[Redacted] we estimate that Iraq has at least 12 to 18 Scud launchers organized into a brigade, with two of these launchers used for training. Baghdad also has at least 25 FROG-7 launchers—some used for training—organized into a brigade. In our judgment, Iraq has a stockpile of about 50 Scud and 100 FROG-7 missiles. [Redacted]

[Redacted]

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Senior Iraqi political leaders apparently control the selection of targets. Scud units are subordinate to the Ministry of Defense, but Iraqi President Saddam Husayn probably selects many of the targets and approves all requests to fire. [Redacted]

We believe the financial burden of the war has stopped any Iraqi program to develop its own long-range missile. [Redacted]

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[Redacted] FROG-7 units are attached to various corps commands along the front. The Soviets do not directly control Iraqi missiles, but we believe Moscow has some influence over targeting.

We judge that the Iraqis have the equipment and expertise to extend the range of Scud missiles, probably by reducing the warhead's weight, although we have no evidence they have begun such efforts. [Redacted]

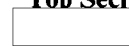
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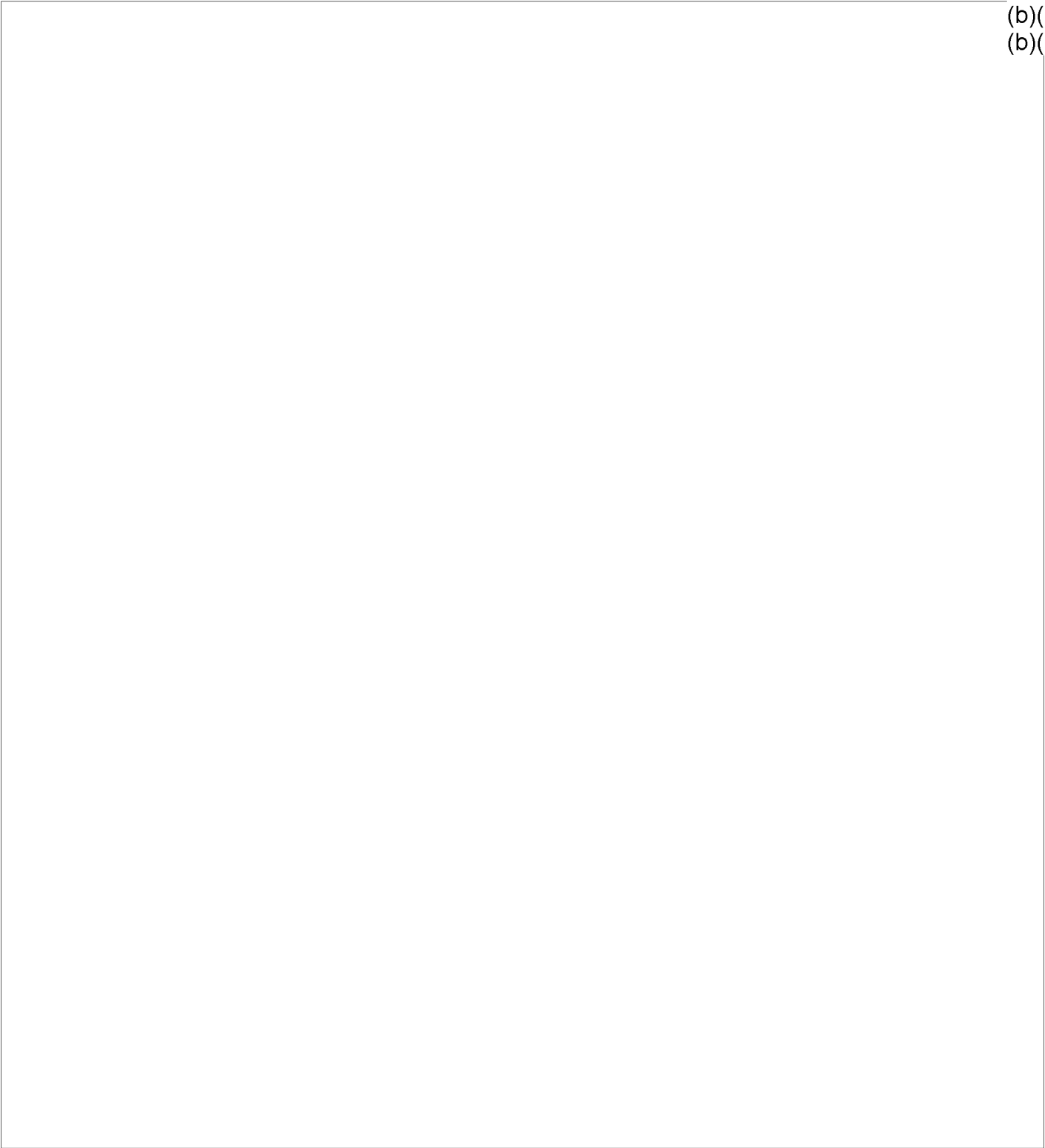
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Figure 4
Iranian Scud Missile Deployment and Coverage



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Iran

Strategy and Operations. Iranian leaders have publicly stated they use their Libyan-supplied Scud surface-to-surface missiles primarily to deter, and retaliate for, Iraqi attacks against civilians. Tehran probably started using missiles in early 1985 as a way to strike Iraq without risking further losses of scarce Iranian aircraft. Iranian public warnings to Iraq about missile attacks have been linked to promises that Iran would cease such operations if the Iraqis stopped bombing Iranian cities. [Redacted]

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Effectiveness. Thirteen Scud missiles have hit Iraq so far. [Redacted] The first missile hit Karkuk on 12 March 1985, and 12 more struck Baghdad between 14 March and 15 June. The Iranians probably stopped their attacks in June to conserve their limited supply of missiles and because Iraqi air attacks on Iranian cities declined. [Redacted]

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[Redacted] we estimate that 60 to 100 Iraqis were killed and 300 wounded in the Iranian missile attacks. The location of the impact points suggests the Iranians attempted to hit areas of Baghdad that contain important government buildings or are densely populated. [Redacted] some of the missiles landed on open areas, river banks, or roads, causing few casualties. [Redacted]

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Although the Iranian attacks initially caused fear among civilians in Baghdad, they failed to lower morale for long or to undermine support for the Iraqi regime. [Redacted] Baghdad's initial refusal to admit that Iran was using long-range missiles led to rumors of terrorist attacks in the Iraqi capital and probably increased fears among civilians. We judge that the Iranian missile attacks would have lowered Iraqi morale more if they had occurred within a few days rather than being spread over four months. Anxiety among Iraqi civilians appeared to decline as they became more accustomed to the attacks and they recognized that the missiles inflicted relatively little harm. [Redacted]

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Capabilities. Iran's surface-to-surface missile capability is very limited compared with Iraq's and is dependent on Libya for equipment and expertise.

[Redacted]

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The Iranian Revolutionary Guard is responsible for the missiles but relies on Libyan advisers to help fire them, [Redacted]

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Development and Acquisition. Tehran claims that it has been trying to develop long-range missiles, but we (b)(1) believe these efforts have not produced a satisfactory (b)(3) weapon. [Redacted] as early as 1983, Iran began programs to build a missile with a range of 200 to 400 kilometers carrying a 1-ton warhead. [Redacted]

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[Redacted] Tehran apparently is trying to compensate for its limited technological expertise by enlisting foreign scientists to help develop long-range missiles. [Redacted] [Redacted]

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The Iranian-Libyan Connection

Meanwhile, Iran is continuing to seek missiles from abroad

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but Tehran's persistence suggests that it may obtain such weapons from North Korea, China, or Syria, especially after the war.

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Future Use of Missiles in the Iran-Iraq War

In the months ahead, Iraq may launch some rockets at Iranian military and economic targets but will continue to favor aircraft for such operations because of the inaccuracy of missiles. We would expect Iraq to fire Scuds at Khark Island if Iranian air defenses in the Gulf improved enough to make air attacks on Khark costlier. Because of the accuracy of the Scud and the destructive force of its warhead, we judge that between 10 and 20 missiles would have to be fired to assure damage to important equipment. Missiles could attack military targets in the enemy rear, but they are unlikely to affect the outcome of the war if they carry only high-explosive warheads.

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If Iraq acquires chemical warheads, it probably would use them against Iranian cities only in response to Iranian chemical attacks against Iraqi civilians. A barrage of Scud missiles carrying a lethal nerve agent would inflict thousands of casualties if fired into densely populated areas of Iranian cities. We believe Baghdad also would fire missiles with chemical warheads if an Iranian offensive threatened to inflict a major defeat on Iraq. Large-scale, intensive use of such missiles along the front would inflict many casualties and would probably delay or defeat the offensive.

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Iraqi diplomatic efforts have failed to halt the flow of weapons from Libya to Iran.

Al-though Baghdad will continue to protest Libya's transfer of Soviet-made weapons to Iran, it is unlikely to go beyond this because of Iraq's dependence on the USSR for military equipment. We believe that Baghdad instead will try to use such transfers to press the Soviets to provide more sophisticated arms to Iraq to offset the Iranian missile threat.

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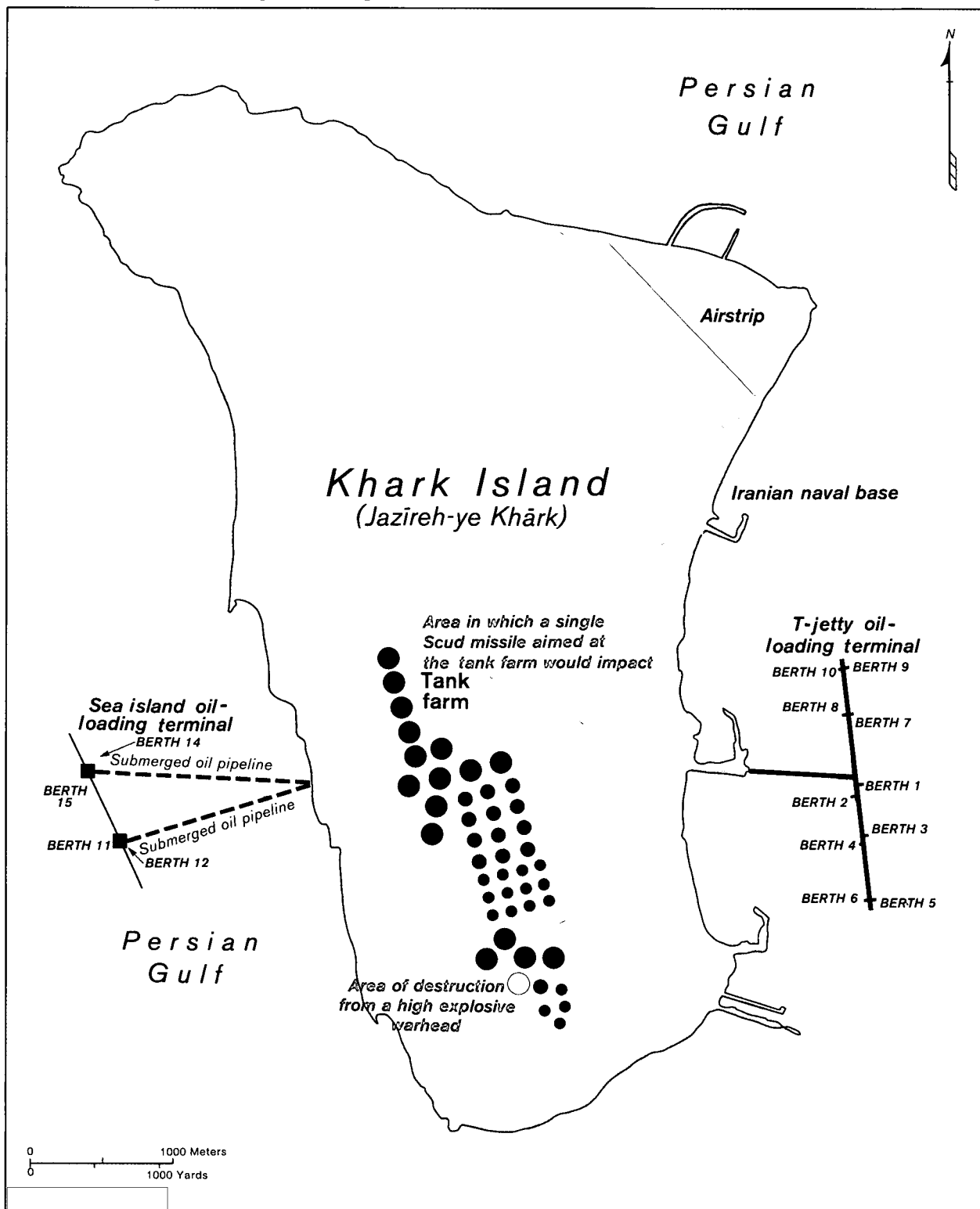
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Figure 5
Potential Damage Resulting From Iraqi Missile Attacks



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[Redacted]

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Iraq's Efforts To Develop Chemical and Nuclear Weapons

Iraq's success in developing chemical bombs and artillery shells suggests that it could develop a crude chemical warhead for a missile, although we have no evidence that it has begun such a program. Iraq's first use of chemical weapons against Iran in August 1983 was the culmination of 20 years of effort. In the last three years, Iraq has used mustard gas against Iranian troops in at least two other major battles, inflicting 2,500 casualties in one attack, according to Iranian press reports.

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[Redacted]

We estimate that the Iraqis have a stockpile of several thousand mustard bombs and artillery shells and hundreds of bombs containing Tabun, a nonpersistent lethal nerve agent. The Iraqi chemical plant at Samarra' probably is capable of producing up to 6 metric tons of mustard gas and 2 metric tons of Tabun daily.

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Iraq is still at least a decade away from having nuclear facilities to support the development of nuclear weapons. Israel's destruction of Iraq's Osirak reactor in 1981 and war-related difficulties have not dampened Baghdad's interest in enhancing its nuclear capabilities. Iraq is conducting basic nuclear research and is continuing efforts to replace the Osirak reactor and to acquire foreign nuclear equipment, technology, and training. We believe that, when the war with Iran ends, Baghdad will accelerate its efforts to complete a nuclear fuel cycle. Although we have little doubt about Iraq's desire to develop nuclear weapons in the long term, its current efforts do not appear aimed at building a bomb in the short term.

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Given the Iranians' firing of Scuds at Baghdad during the March 1985 offensive, we believe Iran may again launch missiles at the Iraqi capital to support a major ground offensive. Iran probably would fire several missiles during the first day of the attack in an attempt to disrupt the Iraqi leadership and weaken its ability to direct military operations. Iran might also begin daily missile attacks on Baghdad to cause panic among Iraqi civilians. To assure disruption in the Iraqi capital, we believe Iran would use many of its remaining 25 to 30 missiles in the first few days of the ground offensive. Tehran probably would save a few missiles for retaliatory strikes to respond to possible renewed Iraqi air attacks on Iranian cities after the offensive began.

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If Iran acquired many additional missiles in 1986, it might fire them against economic and military targets in Iraq to try to weaken Baghdad's ability to continue the war and to retaliate for Iraqi attacks on Iran's oil production facilities. Specifically, Tehran probably would try to target pumping stations along the Iraqi-Turkish or Iraqi-Saudi Arabian pipelines, refineries, chemical weapons manufacturing and storage plants, command and control facilities, or airfields. Because of the Scud's poor accuracy and small warhead, however, the Iranians would have to fire many rockets at such targets to assure damage to important equipment.

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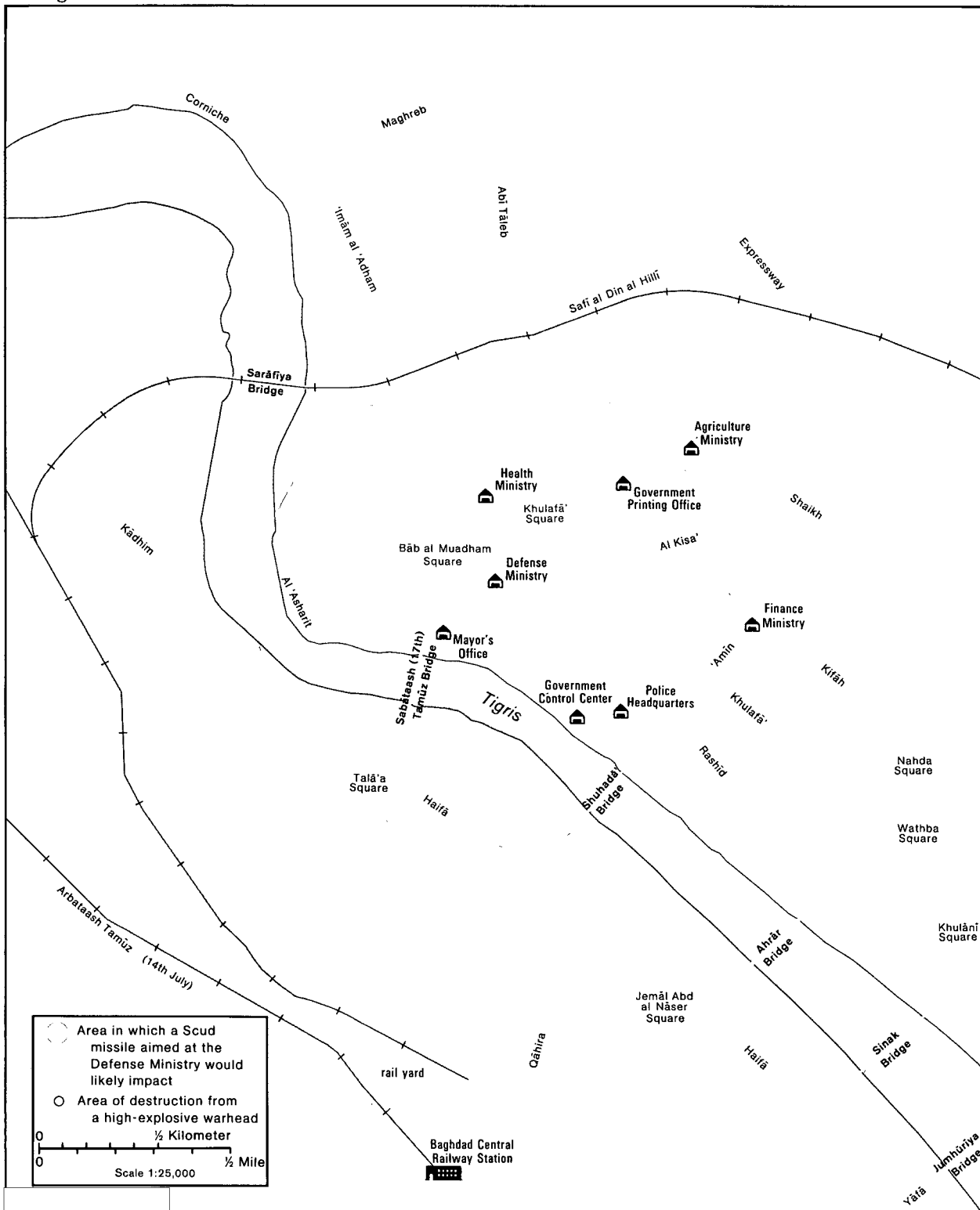
Serious reverses in the war could cause Tehran to threaten to launch missiles against the Gulf states in the hope that they would curtail their support to Baghdad and press Iraq to reduce its military operations against Iran. As Iranian Air Force capabilities deteriorate, missile attacks will become increasingly attractive to Tehran as a possible means to strike across the Gulf. Although a single Scud launched from Iran's coast would be too inaccurate and would carry too small a warhead to have a high probability of destroying vital oil equipment, Iran could fire a series of missiles at one target until damage occurred.

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Figure 6
Vulnerability of Key Government Buildings
in Baghdad to Iranian Missile Attacks



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Long-Term Regional Implications

Even after the war, we believe Iraq and Iran will devote considerable effort to acquiring a large number of powerful missiles because of their potential as a deterrent and a threat. Both countries are likely to acquire additional Scud-type missiles in the next few years. On the basis of their efforts to acquire new missiles abroad and to improve their capabilities, we believe Iran and Iraq will try to obtain more accurate missiles with a range of up to 1,000 kilometers to threaten military, economic, and civilian targets throughout the Middle East. They are likely to have trouble finding willing suppliers as long as the war continues, but, after the war, both countries will be able to make attractive offers of large, profitable orders and cofunding of missile development. [redacted]

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The extent to which acquisition of modern surface-to-surface missiles increases the regional power and influence of Iran and Iraq will depend on how successful the two countries are in developing more lethal warheads. Both countries probably will try to develop crude chemical warheads for their existing missiles in the next few years. We judge that the advantage of long-range missiles to deliver warheads quickly, virtually without warning, and—unlike aircraft—without facing any defense, will be another factor that encourages both countries to develop nuclear weapons in the late 1990s. [redacted]

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Postwar Mutual Deterrence. We believe that Baghdad will view long-range missiles, with chemical or nuclear warheads, as its primary deterrent against Iran. In particular, Baghdad probably believes that the threat of missile attacks on Tehran would help deter Iranian attacks on Iraqi cities in any future Iran-Iraq war. Tehran is likely to view missiles as a particularly effective deterrent against Iraq because they could hit targets that Iranian aircraft could not, given Iraq's sophisticated air defense system. [redacted]

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Intimidation of the Gulf States. Iraq's missiles, along with other parts of the well-equipped Iraqi military forces, will encourage the Arab Gulf states to maintain good relations with Baghdad after the war. More sophisticated missiles will not appreciably add to Iraq's already substantial ability to coerce Kuwait, but the implicit threat of long-range missile attacks on oil facilities could increase Iraq's leverage over Saudi Arabia and other Arab states in the Gulf. Iran also is likely to use an increased missile capability to intimidate the Gulf states by making more credible any Iranian threat to attack key oil facilities. [redacted]

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Threats to Israel. The growing missile capabilities of Iraq and, to a lesser extent, Iran are likely to become major sources of concern to Israel, especially if Iraq develops chemical warheads. Baghdad is likely to judge that an ability to retaliate with more accurate and longer range missiles than it has now will help deter Israeli attacks, particularly on Iraqi nuclear and chemical warfare facilities. Since the Israeli airstrike that destroyed Iraq's nuclear reactor in 1981, Iraqi leaders have repeatedly warned they would retaliate for future raids. We believe Baghdad would be restrained, however, from carrying out threats to fire missiles at Israel itself—especially its cities—even after an Israeli first strike, because of the likelihood of Israeli retaliation. [redacted]

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We believe Israel would be unlikely to launch preemptive attacks to destroy Iraqi missile launchers or chemical weapons production facilities, even if Tel Aviv determined that Iraq had acquired missiles capable of hitting Israel, unless Israel believed an Iraqi strike were imminent. Israel has not attacked Egypt or Syria, although both countries have had missiles capable of hitting Israeli cities, possibly with chemical warheads, for many years. Moreover, we judge that as Iraq gained a large force of mobile missiles, the Israelis would be less able to locate and

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Figure 7
Vulnerability of Gulf Oil Facilities to Iranian Attack



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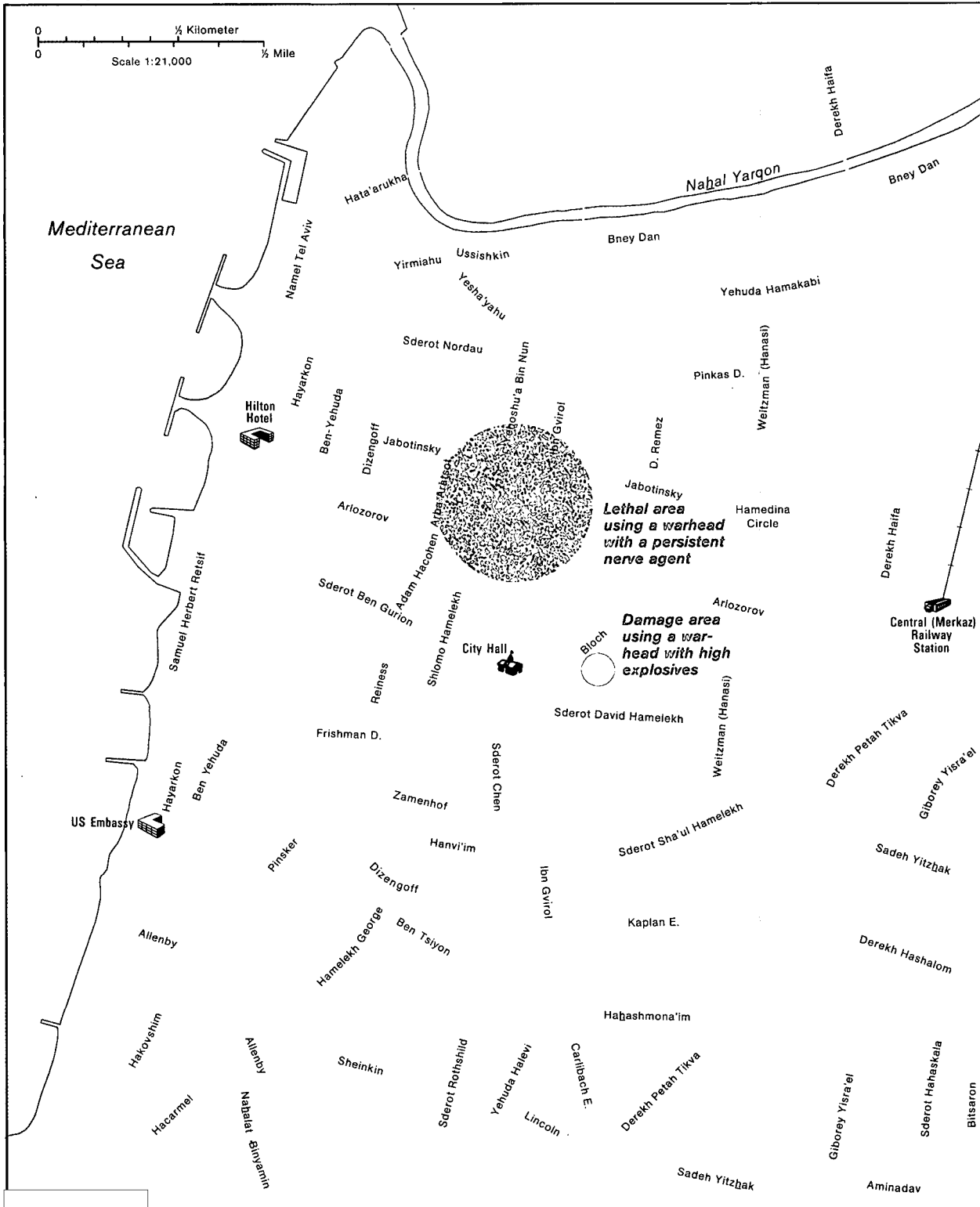
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Figure 8
Potential Damage and Mortality Radii in Tel Aviv
Resulting From High-Explosive and Chemical Warheads

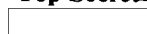


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**Non-Soviet, Long-Range,
Surface-to-Surface Missiles**

	Maximum Range (kilometers)	Warhead Weight (kilograms)
Condor II ^{a b} (Argentina)	300 to 400	200
Sonda IV ^b (Brazil)	300 to 500	1,000
SLV ^b (India)	3,500	200

^a Under development.
^b Estimated capabilities.

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destroy all the launchers, leaving Iraq with a potential retaliatory force. If Israel determined that Iraq was attempting to build nuclear weapons, we believe it would strike the nuclear development facilities again rather than try to destroy missile launchers.

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We judge that Iran cannot extend the range of its existing missiles to reach targets in Israel.

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After the Iran-Iraq war and arms embargoes against Iran end, however, Tehran might acquire such missiles as the Sonda, Condor, and SLV from Brazil, Argentina, or India. Tehran would have to weigh the prospect of Israeli retaliation against Iranians in the Levant or perhaps against Iran itself before firing these missiles at Israel.

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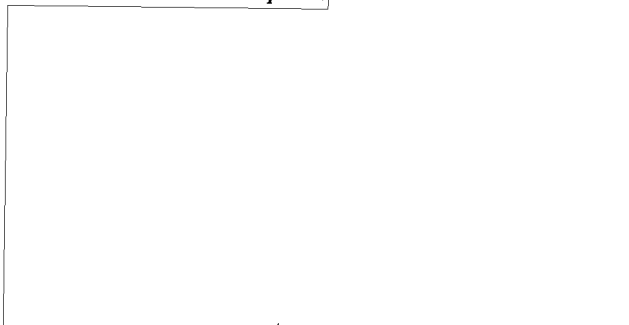
Iranian Deterrence of the USSR. Tehran probably will view long-range missiles with chemical and eventually nuclear warheads as the best way to deter the Soviets from coercing or invading Iran. On the basis of Moscow's strong opposition to the Libyan transfer of Scuds to Iran and the continuing poor relations between the USSR and Iran, we believe that the Soviet Union considers even crude, limited Iranian missile capabilities as a danger and may try to block the transfer of missiles and related technology to Iran. Tehran, in turn, would view this as a Soviet attempt to keep Iran vulnerable to outside pressure.

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**Iran's Efforts To Develop
Chemical and Nuclear Weapons**

Iraqi success with chemical weapons and the ineffectiveness of international condemnation of Baghdad for using them have spurred Iran's efforts to develop its own chemical weapons.

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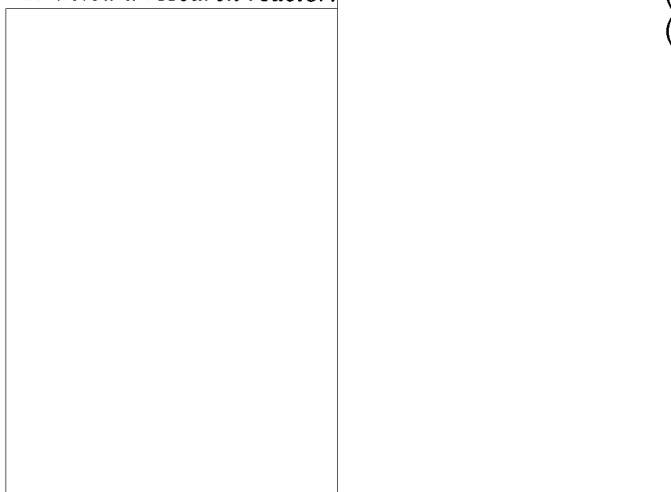


We believe Iran has filled a small number of bombs with chemical agents, which it may use during a major offensive against Iraq.

(b)(3)

We do not believe Iran will have the technology to produce plutonium for a nuclear weapon until at least the mid-1990s, by which time it will have developed significant parts of the nuclear fuel cycle and constructed a research reactor.

(b)(1)
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SC 00394/86

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(b)(3)

Implications for the United States

If Iraq and Iran acquire more advanced missiles, especially with chemical or nuclear warheads, the credibility of US defense commitments in the region may eventually decline. Over the past year, we judge that Arab confidence in the US commitment to defend its Arab allies has been weakened by the failure of the United States to sell these states modern weaponry. The US reluctance to use force against Libya, where potential US losses would probably be relatively small, has further reduced the credibility of US defense commitments in the eyes of some Persian Gulf states, according to Embassy reports. Many Arabs are likely to judge that the United States will be less willing to come to their aid and use its military forces when US personnel and equipment are more vulnerable to losses from missiles with high-explosive or chemical warheads. [redacted]

(b)(3)

Although some Arab states might initially turn to the United States for protection against Iraqi or Iranian missiles, confidence in any US guarantee would eventually be weakened by the difficulty of either destroying the missiles with preemptive strikes or defending against them once they were launched. Mobile missile systems, such as the Scud and the SS-12, are difficult to target because they can be moved frequently and launched from almost anywhere. The missile requires less than an hour to be prepared for launch and can reach its target in less than 15 minutes. Even if the United States detected a launch and passed this information quickly, the target countries would not have time to evacuate civilians or move vital equipment. [redacted]

(b)(3)

Conversely, Israel would attempt to draw the United States into a closer defense relationship and ask for new weaponry to offset the growing threat from long-range missiles. This, however, might induce Iran and Iraq to speed up their efforts to acquire more missiles and to develop chemical or nuclear warheads. In any event, an Arab-Israeli war that included Iraqi missile attacks—even using only conventional warheads—would probably inflict much higher civilian casualties and destruction on Israel than it had suffered in any past conflict. [redacted]

(b)(3)

Ballistic Missile Defense in the Persian Gulf

Iraq and Iran have been unable to neutralize each other's surface-to-surface missile capabilities. Special intelligence indicates that in April 1985 the Soviets informed Baghdad of the general location of Iranian missile sites, but the Iraqis could not find the sites and launch air attacks to destroy them. As early as October 1980, the Iranian Joint Staff gave orders to try to suppress Iraqi missiles at the time of launch, intercept them in flight, or destroy the launchers. In September 1982, Iran asked Syria for help in defending against long-range missiles after launch but was told it is impossible to disrupt the Scud in flight.

(b)(3)

The Arab Gulf states would have little warning and no defense against an Iranian missile attack. They do not have the sophisticated radar systems needed to detect missile launches from Iran. Saudi AWACS lack the range and sensitivity to detect a missile launch. None of their surface-to-air missile systems could intercept and destroy a ballistic missile such as the Scud. The Gulf states are neither willing nor able to launch preemptive airstrikes to destroy the missiles and launchers in Iran. [redacted]

(b)(3)

Increasing Iraqi missile capabilities probably will not pose a threat to US forces in the Middle East in the short term. On the basis of Iraqi efforts to avoid incidents with US warships and aircraft in the Persian Gulf in the Iran-Iraq war, we believe that Baghdad would avoid firing missiles at US targets for fear of provoking US retaliation or intervention. In conflicts against the Gulf states or Israel, however, Iraqi missile attacks might harm US civilians or facilities unintentionally. In the 1990s, we judge that Baghdad will view its growing missile power, especially with chemical and eventually nuclear warheads, as a deterrent to superpower intervention in the region. To

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bolster its influence and claim to leadership of the Arab world, Iraq might try to give the impression that its missiles were a shield against US attack, although we judge that the prospect of extensive US retaliation against Iraq would make Baghdad reluctant to carry out any threats. [redacted]

(b)(3)

We believe that, because of continuing Iranian hostility toward the United States, US forces are likely to face a greater danger from Iranian missiles than from Iraqi missiles. Fear of a US attack on Iran or even an increase in the US presence in the Gulf probably would deter Iran from launching a surprise or unprovoked attack on US forces. Rather, Iran would try to hold US facilities in the Gulf hostage to prevent US military operations against Iran. In the event of US-Iranian hostilities, the clerical leadership probably would attempt retaliatory attacks with missiles, such as on the headquarters of the US Middle East Force in Bahrain. Tehran's perception that its missile forces were helping to curtail US military activity in the Gulf might also make Iran less reluctant to restrict passage through the Strait of Hormuz [redacted]

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