National
Foreign
Assessment
Center

25X1

IRAN-IRAQ
+
IRAN

# The Iraq-Iran War: Military Performance and Prospects

An Intelligence Assessment

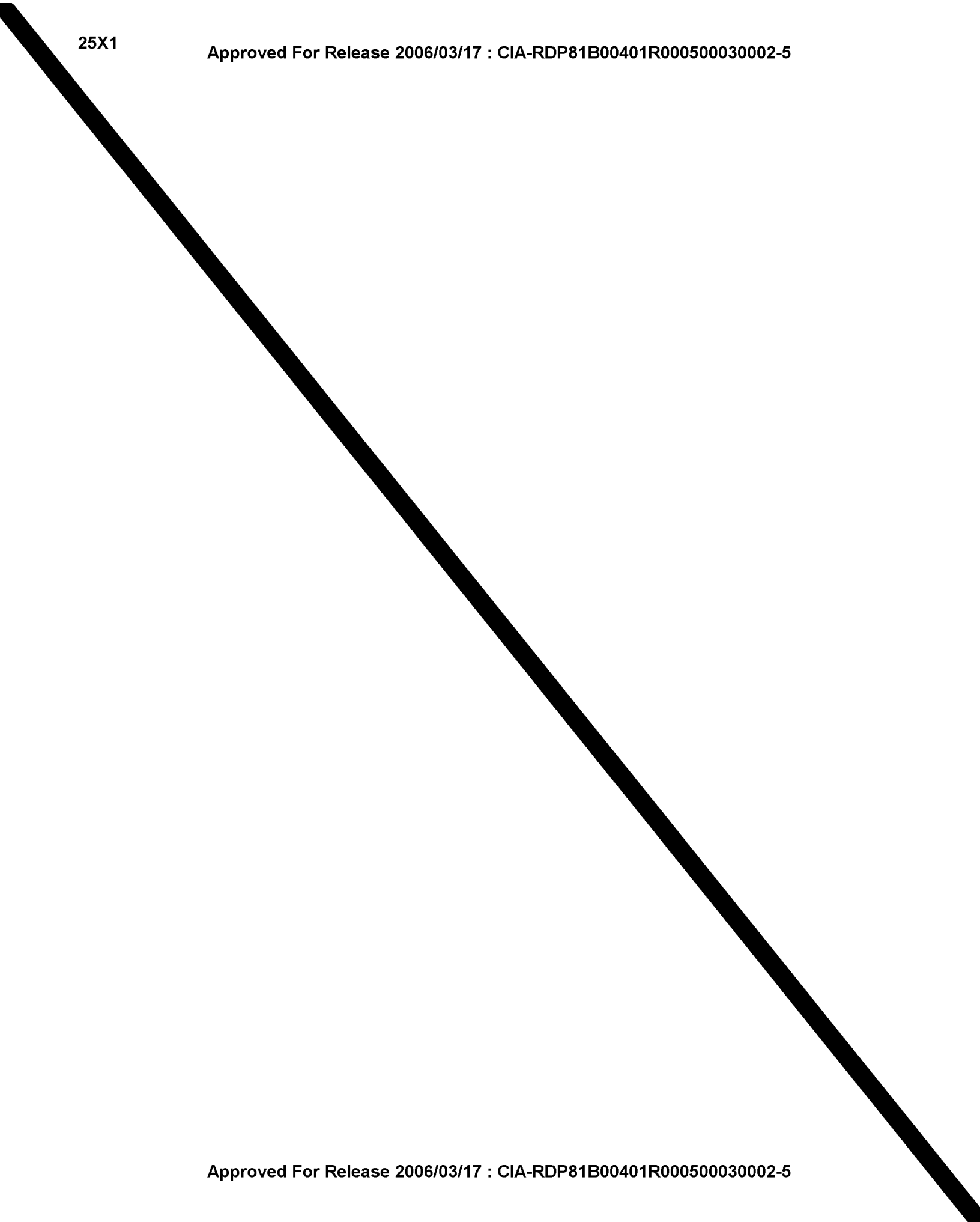


Top Secret

SR 80-10157JX

December 1980

25X1



Approved For Release 2006/03/17 : CIA-RDP81B00401R000500030002-5

National
Foreign
Assessment
Center

[redacted]

25X1

# The Iraq-Iran War: Military Performance and Prospects [redacted]

25X1

**An Intelligence Assessment**

*Information available as of 1 December 1980 was used in the preparation of this report.*

25X1

[redacted]

**Top Secret**
*SR 80-10157JX*
[redacted]
*December 1980*



25X1

# The Iraq-Iran War: Military Performance and Prospects

25X1

## Key Judgments

Despite its successes thus far, the Iraqi military probably cannot apply enough pressure to achieve Baghdad's ambitious strategic objectives in the near future. These objectives are Iranian recognition of Iraqi claims to border territories and the Shatt al Arab waterway, an Iranian pledge to refrain from interfering in Arab affairs, and the return of three Gulf islands to Arab control. Nevertheless, we expect that Iraq will continue its airstrikes against economic targets deep inside Iran, with potentially crippling effect, and it may make further ground advances into Khuzestan. If Iraq enters any negotiations in the next several months, it will be from a position of military superiority.

25X1

## The Ground War

From a military standpoint, the Iraqi ground campaign has been only moderately successful:

- The initial tactical objective—to occupy disputed border territories—was accomplished within the first few days of the war, and Iran has no prospect of dislodging the Iraqi forces soon.
- The second objective—control of the waterway—is taking longer than the Iraqis expected but probably could be achieved in a few months if Iraq chose to send troops into Abadan.
- Although pockets of resistance remain, none poses a militarily significant threat to the Iraqi tactical rear. Failure to take the salient northwest of Ahvaz before the end of the year, however, would allow Iran to reinforce and make an Iraqi attack more costly.

25X1

The failure to rapidly subdue all Iranian resistance in occupied areas and the relatively slow advance despite highly favorable conditions raise questions about the performance of the Iraqi ground forces. Although deficiencies are evident in both commanders and forces, Iraqi units have performed well in comparison to those of other Third World armies. The Army could have moved more rapidly and decisively, but from the outset Baghdad's policy was to minimize losses. The resulting tactics can be criticized for allowing the enemy to live to fight again, but they have been generally successful both at eventually achieving tactical objectives and, in the short run, at limiting losses.

25X1

25X1

25X1

Iran, fighting on the defensive, found its war strategy dictated by Iraq. Its strategy has been to delay or stop the enemy advance, to mobilize its own larger population for a protracted conflict, and to make the war so costly to Iraq in terms of casualties, materiel, and financial resources that Baghdad would withdraw; Iran also hopes that a lengthy, inconclusive conflict will undermine the Baathist regime of Saddam Hussein. The Iraqi advance has been slow enough to allow Tehran ample time to mobilize reserves and reinforce frontline units, but Iran's overall military response has been even slower and largely ineffectual. Nonetheless, the stubbornness of Iran's Revolutionary Guards defending Khorramshahr apparently helped convince Iraq to refrain from pitched infantry battles for the cities of Abadan, Dezful, and Ahvaz—all reportedly initial Iraqi objectives.

25X1

**The Air War**

The main effects of the air war have been economic and psychological. Airpower has had little direct influence on the course of the ground war, and the conflict has not denied to either country's air force the capability to sustain significant operations. The Iraqi Air Force failed to neutralize the Iranian Air Force on the ground in the opening days of the war—primarily because of a lack of realistic planning and commitment of resources and partly because of malfunctioning or inadequate equipment. Iran has made few attempts to attack Iraqi airpower on the ground.

25X1

Neither side's air force has been successful in air-to-air combat. Neither has radar systems that can adequately vector interceptors against intruders, and the Iraqis generally have been reluctant to engage Iranian aircraft in the air, fearing significant losses to superior Iranian aircraft and pilots.

25X1

Airstrikes have not devastated oil facilities, although damage is growing; at this point both sides would be able to repair most damage within several months after hostilities ceased. Whereas damage to Iraqi POL shipping terminals in the Gulf could take six to 12 months to repair, the damage apparently was caused mainly by commando and naval attacks; Iraqi air attacks on Iranian terminals have been ineffectual. The war, however, has resulted in a sharp cut in current oil output. The threat of damage to its facilities caused Iraq to shut down virtually all production for export from the outset of the war, although limited production for export resumed in late November. Iraqi air and artillery attacks have destroyed most of Iran's refining capacity, but Iran's oil-production facilities are essentially undamaged.

25X1

From the beginning, Iran's air strategy has sought—with some success—to demonstrate Iraq's vulnerability to deep-penetration raids and to gain maximum psychological impact and publicity by striking high-visibility targets. Iran's strategy is based in part on a desire to limit losses and a

25X1

recognition that its Air Force does not have a reliable source of resupply for jet fuel and spare parts. Iran's ability to strike vulnerable targets near the Gulf has been a factor in the reluctance of other Gulf states to give Iraq access to the forward bases from which it might effectively challenge Iran's control of the Strait of Hormuz. [redacted] 25X1

**Prospects**

Iraqi ground forces plan to hold their positions in Iran for some time, and by late November Baghdad reportedly had decided to refrain from further advances this winter. The Iraqis are unlikely to open a major new offensive into Khuzestan until they capture Abadan and the salient northwest of Ahvaz. Iranian ground forces cannot soon reverse the course of the war by launching a major counterattack, but Iran probably will seek to frustrate any further Iraqi advances by reinforcing the threatened cities in Khuzestan with Revolutionary Guards and additional combat groups formed by combining small units from several divisions. The Iraqi Air Force will be capable of attacking Iran's petroleum-refining capability for many months, causing extreme hardship in Iran. [redacted] 25X1

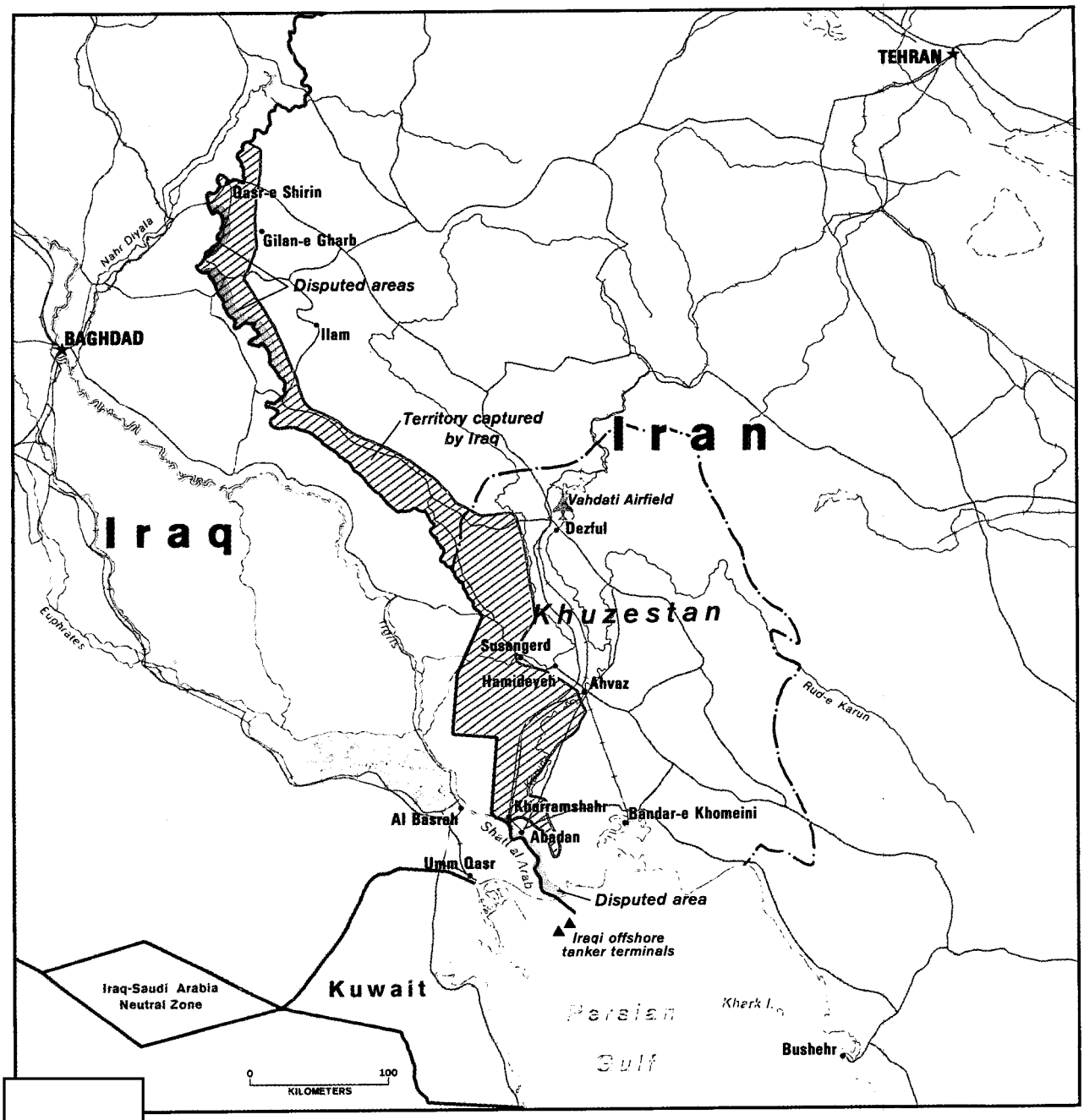
Iraq probably can hold its current positions indefinitely, even if the Soviet Union continues to withhold major military equipment and spare parts, but the lack of full Soviet support will inhibit an Iraqi decision to increase the intensity of combat or to advance farther. Iran, on the other hand, has an acute need of spare parts. It faces a severe decline in its air capabilities, which could only be arrested after several months of sustained delivery of US-made spare parts. [redacted] 25X1

## Contents



**Appendixes**

25X1




25X1

25X1

25X1

25X1 **The Iraq-Iran War: Military Performance and Prospects**

## The Ground War

### Iraq

From a military standpoint, the Iraqi ground campaign, begun on 22 September, has been only moderately successful. Initial Iraqi tactical military objectives were to occupy disputed border territories, to control the Shatt al Arab waterway by taking Khorramshahr and Abadan and adjacent areas, and to take as bargaining chips additional territory and cities, including Qasr-e Shirin, Dezful, and Ahvaz. The first objective has been accomplished: within the first few days of the war a multidivision combat force occupied not only the disputed border territories, but also large portions of Iran's Khuzestan Province, and Iran has no prospect of dislodging it soon. The second—control of the waterway—is taking longer than the Iraqis expected but probably could be achieved in a few months if Iraq chose to send troops into Abadan. As for the third objective, Iraqi forces have captured only the cities of Qasr-e Shirin and Khorramshahr and a number of smaller towns. Early on, the Iraqis apparently modified their tactical objectives, abandoning plans for the early capture of Dezful and Ahvaz—probably because of the difficulty they encountered in taking Khorramshahr.

25X1

By early October, Iraqi ground forces had advanced as far as their initial tactical objectives required. The map generally represents the points of farthest advance on 4 October, when Iraq proclaimed that it would advance no farther. In fact, no major areas of advance have been opened, although the opposing forces have been limited.

25X1

Pockets of Iranian resistance still remain, but none poses a militarily significant threat to the Iraqi tactical rear; we believe that the resistance could be subdued by the end of the year if Iraq chose to make the effort. Only one of the pockets—the resistance in Abadan—has political significance: it represents the last major obstacle to Iraq's gaining control of the Shatt al Arab waterway. Iranian resistance on the salient northwest of Ahvaz probably would have to be subdued before Iraq considered further advances into Khuzestan, because the salient is potentially a major Iraqi supply route. Continued Iranian activity in areas north of Khuzestan does not seriously threaten Iraqi positions, although both sides continue to take losses from air attacks, artillery duels, and small ground forces skirmishes; the Iraqis apparently are seeking somewhat more defensible positions near Gilan-e Gharb and Ilam.

25X1

***Performance.*** Despite successful aspects of Iraq's campaign, the failure to rapidly subdue all Iranian resistance in occupied areas and the sluggishness of the advance—under highly favorable conditions—raise questions about the performance of Iraqi ground forces. On axes where they enjoyed numerical advantages of better than five to one, for example, they moved only 5 to 10 kilometers per day. This occurred despite the Iraqi enjoyment of several advantages that should have permitted more rapid movement:

- The traditional advantages of the attacker—the opportunities to prepare the offensive under peacetime conditions and to choose the time and place for primary thrusts.
- The drastic decline in Iran's military capabilities—probably by as much as 50 percent—since the overthrow of the Shah.
- Topography, which greatly favored the deployment and resupply of Iraqi forces while presenting major obstacles for the Iranians.

25X1

The Iraqi Army almost certainly would have moved more rapidly and decisively but for Baghdad's policy of minimizing personnel losses. This plan was designed both to soften the domestic impact of the war and to avoid testing the loyalty of Iraq's predominantly Shia infantry in close-in combat with Iran's almost exclusively Shia infantry. This damage-limiting policy

25X1

greatly influenced the tactics employed by commanders both in the field and in urban areas. Iraqi commanders generally have avoided large-scale frontal assaults with tanks or infantry.

25X1

From a military standpoint, these tactics can be criticized for allowing the enemy to live to fight again, but the commanders generally have succeeded both at achieving tactical objectives and, in the short run, at limiting losses. We do not know precisely how many casualties Iraq has suffered (see appendix A), but except for the fight for Khorramshahr (where 1,500 Iraqis reportedly were killed), battles have been of low intensity and casualties apparently have been light on both sides.

25X1

Other factors that have been unaffected by the damage-limiting policy, however, reflect poorly on Iraqi ground performance and military capabilities:

- Control has been overcentralized. The political and military leadership reportedly has tightly controlled combat operations from Baghdad, probably causing delays in decisionmaking and in the transmittal of orders, and reducing the flexibility of commanders in the field.

- The quality of command has been uneven. Iraqi commanders have been even more tentative than expected. They would understandably have been cautious, given their own and their troops' inexperience. But commanders—a number of whom received their positions because of political loyalty rather than professional competence—also have shown little imagination and have often failed to cut off routes of resupply and reinforcement or to exploit tactical advantages. Several tactical commanders have been relieved of their posts—in one instance for failing to progress rapidly enough—but we do not know whether they were truly inept or merely scapegoats for faulty decisions by their superiors.

- Tactical air defense is deficient. Iraq's tactical air defense operations have revealed shortcomings in control procedures, operator discipline, and field deployment practices. Although these deficiencies caused Iraqi ground maneuver units to take unnecessary casualties during the initial weeks of the war, they probably have had only slight impact on overall rates of advance (see Tactical Air Defense, page 3).

25X1

Notwithstanding these flaws, the Iraqi ground forces have performed well in comparison to most other Third World armies.[1] The Iraqis have demonstrated that their armored and mechanized forces are large and modern and that they can effectively deploy and maneuver these forces in combat. Units have shown discipline on the march and, when temporarily halted, have dispersed, dug in, and camouflaged. Resupply operations have reflected excellent traffic management, apparently have avoided major bottlenecks, and have provided most units with sufficient materiel.

25X1
25X1

***Combined-Arms Maneuver Tactics.*** Although Iraq's conservative combined-arms tactics have resulted in slow rates of advance, the armored forces have achieved most tactical objectives in the field easily and with few losses. The Iraqis' advantage in armor throughout the front is about six to one, and on most axes they have been able to engage tank, mechanized, and artillery units with numerical advantages of at least three to one and sometimes more than five to one. In most tactical situations Iraqi commanders have avoided costly frontal attacks with tanks and dismounted mechanized infantry, preferring instead to array numerically superior forces in front of enemy

25X1

defenses and then to pound them with artillery in the hope of forcing the defenders to withdraw. Still, a few frontal engagements have occurred, and in at least one instance the Iraqis forced an Iranian withdrawal by threatening to outflank the defenders. In all but one of the major armored engagements for which we have data, Iraq apparently refrained from encircling Iranian maneuver units and left them a withdrawal route.

The only axis on which these tactics have failed is the northwest approach to Ahvaz, through Susangerd and Hamidiyeh. We do not yet know specifically why Iraqi armored units have not taken this area, after almost two months of combat against light opposition. Terrain there has afforded the enemy a defensive advantage, although in late November armored forces were in a position to engage on flat terrain. The Iraqis continue to lay down artillery fire and slowly probe Iranian defenses with small armored units. They apparently still expect the Iranians to withdraw, and they show no inclination to conduct a large-scale frontal assault or to outflank the Iranians by moving superior forces from opposite Ahvaz.

***Urban Warfare.*** The Iraqis have sought to avoid infantry engagements in urban areas whenever possible. They have first bombarded a town with artillery, focusing primarily on its outskirts, and have sometimes conducted limited aerial bombardment. Such attacks apparently are intended to encourage residents and defenders to flee. In all cases for which we have evidence, an avenue of retreat was initially left open. Subsequently, armored vehicles have entered, and foot soldiers have arrived only after the town was generally secured. After a few weeks of occupation, elements of the paramilitary People's Army have replaced Iraqi regular Army units.

These tactics—which have seen most towns occupied fairly rapidly and with relatively few losses—have been ineffective against the major cities, most notably Khorramshahr, and have produced extended sieges. One reason was the Iraqi failure, after the initial bombardment, to close Iranian avenues of retreat—which instead became routes for resupply and reinforcement. In the case of Khorramshahr, the Iraqis have had to modify their tactics and commit to street battles elements of three brigades of foot soldiers (a special forces brigade and two mountain infantry brigades) and elements of an armored brigade. In this aspect of the war, as in many others, information is often contradictory.

[redacted]

mand posts. Poor maintenance and the lack of trained personnel and spare parts may explain the scant use of this potent weapon. The Iraqis have employed infantry equipped with machine guns in forward positions to defend against enemy attack helicopters, apparently with some success. Fighter aircraft also have occasionally been used.

[redacted]

[redacted]

[redacted]

After the first two weeks of the war, the Iraqi tactical air defense situation appeared to have improved somewhat. This was partly because of a denser disposition of air defenses [redacted] because the overall capability of the Iranian Air Force is drawing down. Nevertheless, through late November the Iranians still were conducting daily strikes on engaged Iraqi forces in some sectors. [redacted]

**Iran**

Iran's strategy for ground force operations has been to defend areas under attack, to stop the Iraqi offensive, and to make Iraq pay an unacceptable price for continuing the war. Iran has benefited from Iraq's slow pace and cautious tactics. Contingency military plans developed under the Shah called for rapid movement of nearly all regular Army divisions to the front to repel an Iraqi invasion. Because of inept leadership, the poor condition of the Army's equipment, and the shortage of trained crews for much of the equipment, the Army could not carry out the plans [redacted]

***Reaction to the Incursion.*** Surprised and overwhelmed by Iraq's vastly superior forces, Iran's units stationed closest to the border were left with few options. Rather than risk pitched battle, most of them withdrew to garrison towns and set up defensive positions. [redacted]

[redacted]

Fortunately for the Iranians, Iraq chose to avoid major ground engagements. That choice spared the Iranians from destruction on the battlefield and allowed them to preserve their unit integrity while retreating to defensible positions. From their defensive or blocking positions, Iranian forces were able to use their artillery and tank guns to best advantage against static or slow-moving enemy forces. [redacted]

[redacted]

Most of the withdrawing Iranian regular maneuver units appeared to maintain their discipline. Elements of the divisions fighting in Khuzestan conducted orderly, phased withdrawals from one blocking position after another, and in the salient northwest of Ahvaz they are still holding out. Some units panicked, however, and left behind much of their equipment. The Iraqis have captured at least 100 abandoned tanks. [redacted]

***War of Maneuver.*** As Iraqi forces advanced toward Ahvaz and Dezful, Iranian forces carried out textbook delay and withdrawal tactics but demonstrated little flexibility or battlefield initiative. Outnumbered Iranian platoons and companies deployed in well-organized blocking positions until forced to withdraw, when they would retire to the next logical blocking position. [redacted]

Iran's overall military response to the invasion has been ponderously slow. [redacted] near Dezful. After five weeks of war, Iran had increased its forces there from one to two brigades. In large measure, this weak response was due to confusion in the chain of command, distrust between the central government and the regular armed forces, and nearly two years of inadequate training and planning. [redacted]

[redacted]

25X1

25X1

The same problems hampered the operations of Iranian units in the forward area as well. As Iraqi forces advanced, the two Iranian armor brigades responsible for the defense of Ahvaz and Dezful moved into position, leaving most of their armor and equipment in garrison—largely because they were in poor condition or without crews.

25X1

The government finally recognized the problems caused by the absence of a clearly defined military-political chain of command but has been able to do little to improve the situation. On 12 October Khomeini announced that a newly organized Supreme Defense Council would have full powers to conduct the war and foreign policy, but we are unaware of any significant improvements resulting from this organizational change. Indeed, the Council has been hampered by continuing internecine rivalry, and some of its members have publicly admitted that it has not resolved Iran's problems with the chain of command.

25X1

As Iraqi forces halted outside Dezful and Ahvaz, Iran's defensive activity allowed Tehran to claim that its forces had stopped them. The Iranians were, in fact, again deployed in well-organized defensive positions, and they continued to use their artillery and antitank weapons to harass the dug-in Iraqi units. The low intensity of Iran's defense, however, and the relatively light damage to Iraq's overwhelmingly superior forces tend to weaken Tehran's claim.

25X1

Iran has not demonstrated the capability to mount a large-scale counterattack, but it has attempted to keep the Iraqis off balance by launching small, localized offensive actions. In mid-October, for example, after receiving their first reinforcement maneuver unit, the Iranian defenders at Dezful moved a few companies across the Karkheh River and attacked the Iraqis with tanks. Although they apparently destroyed a few Iraqi armored vehicles, they lost about 15 tanks—a third of the attacking tank force—and failed to force any change in the disposition of Iraqi units. The small scale of this counterattack and its limited effect—even though the attack was launched from the city where Iran appears to be concentrating most of its reinforcements—reflect the desperate nature of the Iranian Army's situation and its inability to put the Iraqis on the defensive or to dislodge them.

25X1

25X1

***Urban Warfare—Khorramshahr.*** The long duration of the battle for Khorramshahr reflects less the quality of either side's conventional forces than it does the nature of urban warfare, the stubbornness of revolutionary zealots, and Iraq's unwillingness to commit large numbers of infantry troops. Indeed, the performance of Iranian regulars and Revolutionary Guards and other militia during the battle for the city demonstrates anew that a small, poorly organized, and lightly armed force, when determined to resist, can transform a struggle for a large city into a prolonged and costly affair even when it is outnumbered by a conventional army.

At the outbreak of the war, few Iranian regulars were in the Khorramshahr area. To defend the city, local commanders threw together a mixed force composed of a few artillery batteries, some border guards and gendarmerie, small elements of the 92nd Armored Division, naval commandos assigned to the naval facility at the city's port, Revolutionary Guards, and civilians. Because the Iraqis failed to completely seal off the city early on, some Iranian reinforcements managed to join the defenders during the battle.

25X1

25X1

The battle for Khorramshahr, in fact, appeared to be a series of loosely connected or isolated engagements involving the diverse Iranian elements defending the city. Iranian artillery batteries exchanged fire with Iraqi artillery located on both sides of the border and effectively harassed armor and infantry forces attempting to enter the city. Infantrymen using antitank missiles, antitank rockets, recoilless rifles, and homemade fire bombs reportedly destroyed or damaged a number of Iraqi armored vehicles. Many of the Iraqi casualties taken to hospitals in Basrah reportedly suffered from burns from homemade gasoline bombs and from gunshot wounds inflicted by snipers, a reflection of the chaotic nature of the battle as Iraqi infantry attempted to occupy the city. Iranian forces apparently changed their locations frequently, temporarily giving the Iraqis the false impression that resistance had collapsed and probably influencing the various premature Iraqi announcements that the city had been captured.

25X1

25X1

25X1

The Revolutionary Guards—a militia force composed mostly of ethnic Persians fiercely loyal to Ayatollah Khomeini and the Islamic revolution—played a major role in the battle for control of Khorramshahr. The Iraqis expressed surprise at the tenacity of the Guards and other militia in the face of overwhelming odds. Having received little more than basic combat training, the Guards had performed poorly in counter-insurgency operations against the Kurds before the war. As urban guerrillas in Khorramshahr, however, they were able to use their limited training to its best advantage. They could ignore conventional tactics and the command and control requirements associated with them while they operated in small, largely independent units to harass Iraqi regulars.

**The Air War**

The main effects of the air war have been economic and psychological. Airpower has had little direct influence on the course of the ground war, and air strikes have not seriously degraded the capability of either air force to sustain air operations:

- The Iranian Air Force continues to hamper Iraqi ground operations, but airstrikes never have been intensive enough or coordinated enough to stem Iraqi advances. The Iraqis' air support to their ground operations also has been limited thus far.

- Iraqi air attacks during the first week focused on Iranian airfields, reportedly to neutralize the Air Force on the ground. That strategy failed to cripple Iranian airpower but did weaken it. Iran's retaliatory airstrikes against a few Iraqi airfields did not interrupt Iraqi air operations.

- Iranian air capabilities have gradually declined because of aircraft losses—primarily to ground fire—dwindling fuel supplies, and shortages of spare parts and technicians.

From the beginning, the purpose of Iran's air strategy has been to demonstrate that Iraq is vulnerable to deep-penetration raids by gaining maximum psychological impact and publicity through strikes at high-visibility targets. It has implemented this strategy since the opening of the war, recovering quickly from Iraq's abortive attempt to gain air supremacy and immediately launching retaliatory strikes on major strategic targets in Iraq, including oil facilities, airfields, and large cities. 25X1

Iraq, too, has struck deep into its opponent's territory. Early in the conflict it attacked petroleum storage facilities, a tank factory, a military garrison, and economic targets in a few cities. During October, Iraqi strategy shifted to include a greater number of bombing missions against economic and transportation facilities and population centers; among these missions were three successive days of attacks on Tehran, which had been struck only sporadically before. Baghdad's objectives during this period reportedly were to create economic havoc and starvation this winter; and persistent attacks on Iranian oil installations probably could achieve that end. Information on the Iraqis' use of airpower is limited; although the strategic bombing campaign is continuing, it appears to be of low intensity. We cannot yet determine whether the apparent increase in daily fighter sorties during late November will result in significantly more strategic bombing missions. 25X1

Airstrikes have not yet devastated oil facilities, even though damage is increasing; both countries probably will be able to repair most of the damage within several months after hostilities cease. At the war's outset, the threat of airstrikes caused Iraq to shut down virtually all oil production for export, but limited production for export was resumed in late November. Attacks on the oil installations of both sides during the first two weeks were targeted almost exclusively against storage tanks, not refining or transshipment facilities. Since then, some refining facilities have been attacked, but damage from airstrikes at most of them has been relatively light, and most refineries probably could be repaired within a few months after hostilities cease. Airstrikes against the transshipment facilities of both sides have resulted in little damage, although Iranian commando or naval raids apparently did serious damage to Iraq's two primary shiploading terminals in the last half of November. 25X1

Iran's air raids outside its borders have had an impact on Iraq that is greater than the immediate physical damage. Because Iraq cannot completely stop the raids, thousands of foreign workers important to Iraqi

25X1

economic development have left the country, and few are likely to return until the conflict ends. Moreover, it has been unable to get the full support of the Gulf states because it has not removed the threat of retaliatory Iranian air attacks against them. Indeed, in mid-November, Iran struck targets in Kuwait in retaliation for Kuwaiti efforts to resupply Iraq. The continuing threat of Iranian air raids has been a factor in Iraq's inability to gain access to forward bases from which it might effectively challenge Iran's control of the Strait of Hormuz.

Neither side has been successful in air-to-air combat missions. We believe that most aircraft shootdowns have resulted from ground-based air defenses.[2]

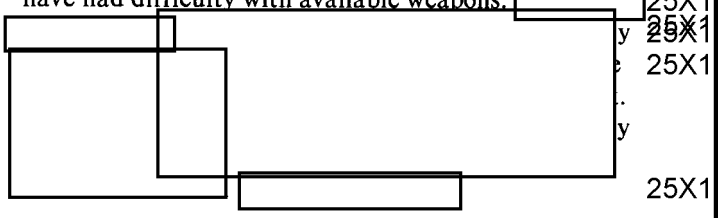
Nevertheless, difficulties with air defense operators, control procedures, and equipment have significantly reduced the effectiveness of both countries' air defense systems.

**Iraq**

Because the Iraqi Air Force was in some basic respects ill-prepared for the war with Iran and because some of its operations have been based on erroneous perceptions about Iranian air capabilities, its role in the overall war effort has been marginal. The Iraqis had just begun programs to upgrade aircraft, air ordnance, and air defense radar and control systems. The Air Force's deficiencies and exaggerated estimates of Iranian interceptor capabilities probably made the air leaders overcautious, even timid, about employing their forces. For example, the leaders have been reluctant to allow their fighters to actively engage the Iranians in the air because they believe their aircraft and possibly their pilots are markedly inferior to those of Iran. This perception and the poor state of the Iraqi air defense systems have afforded the Iranians opportunities to attack the Iraqi heartland that they would otherwise have lacked. Although the Iraqi Air Force has performed a variety of missions—counter-air, air defense, ground support, interdiction, and antiship—only its strategic bombing appears to have made a meaningful contribution to the overall war effort.

[2] Iraq reportedly had lost 90 aircraft by early November and Iran 90 by late October. Losses in equipment and personnel are discussed in appendix A.

***Counter-Air.*** Although the Iraqi Air Force reportedly expected its initial attacks on Iran's airfields to neutralize the Iranian Air Force, that strategy failed, primarily because resources were improperly committed and partly because equipment malfunctioned or was inadequate. The strategy was influenced by overoptimistic estimates of how rapidly Iranian maintenance difficulties and fuel shortages would affect flight operations. The Iraqis repeatedly attacked a number of airfields, but only at Vahdati Airfield near Dezful were the strikes concentrated enough to prevent fighter operations, and there only for a few days. The Iraqis apparently lack specialized ordnance for attacking runways, and they have had difficulty with available weapons.



Although Iraq's counter-air targeting showed somewhat more sophistication during November, it still is not designed to rapidly neutralize the Iranian Air Force.[3] For example, an Air Force parts facility—possibly the Air Force's central supply facility—and a major aviation fuel storage facility in Tehran were struck, apparently with some success, but attacks on such targets and on refineries will not have an immediate effect on airpower. Iraq still occasionally attempts to crater Iranian runways, but unless it makes repeated, daily attacks, cratering will hamper but not prevent air operations. Moreover, the Iraqis apparently still are foregoing attacks on base-level maintenance, fuel, or control facilities, damage to any of which would seriously hamper flight operations in the short term.

***Strategic Air Defense.*** Although Iraq's strategic air defense system suffers from prominent deficiencies, it has limited the damage from Iranian air attacks. Indeed, most of the Iranian aircraft lost to date apparently were downed by ground-based air defense systems. By driving up the cost of attacking Iraq, the Iraqi

[3] Appendix B discusses Iraq's capability to neutralize the Iranian Air Force.

air defense system also probably has deterred strikes the Iranians would otherwise have launched. The mere existence of strategic air defenses has forced the Iranians to penetrate at extremely low altitudes and at high speeds, reducing the accuracy of delivery. (Some weapons even have even been released outside target areas.)

Iraq's air defense system achieved these limited successes despite its deficiencies. Had Iraq been better prepared, Iran probably would have been forced to conduct even fewer strikes. Initial dispositions of radars and weapons systems left gaps, which the Iranians penetrated many elements of the air defense system are not integrated and that AAA units fire autonomously and in manual modes, wasting ammunition and reducing accuracy. Indiscriminate firing downed friendly aircraft—at least one IL-76 transport and several helicopters—early in the war. Moreover, the Iraqis have been slow to redeploy their ground-based systems—particularly those that are effective at low altitudes—in response to Iranian penetration tactics.

The interceptor force also was ill-prepared to contend with enemy airstrikes. Iraqi fighters have flown 20 to 80 sorties daily—as many as 159 on one day in mid-November—and although many of these aircraft have been vectored toward Iranian penetrators, only one shootdown of an Iranian aircraft can be confirmed. This low rate of engagement results partly from caution and probably also from poor training, too rigid control procedures, and a poorly integrated ground-controlled intercept system. The war caught the Iraqis in the early stages of a long-term program to upgrade their interceptor force with Western aircraft, avionics, and armaments, leaving them with a force that is inferior in many respects to Iran's.

***Ground Support and Interdiction.*** Iraqi air support to ground forces apparently has been negligible. Fighter-bombers rarely practiced joint air-ground operations in peacetime, and we have little evidence that they have provided close air support during the war. On at least

Attack helicopters apparently are the only air assets the Iraqis have regularly used in close-air-support missions. Soviet MI-24s probably have seen action, but we have no information on their performance. The effectiveness of the French Gazelle attack helicopters initially was reduced by inept gunnery—the crews reportedly fired 15 missiles for each hit. Maintenance and reliability of equipment have also created problems; at one time, for example, almost 60 percent of the Iraqis' Gazelle fleet was grounded; the French probably soon corrected this problem.

A few of about 50 battlefield and deep-interdiction missions known to have been flown by Iraqi fighter-bombers have inflicted heavy damage—a troop column was 80 percent destroyed, and an ammunition depot and its rail loading facility were largely destroyed. We lack information on the extent of destruction to other targets, which have included bridges and ground forces headquarters, camps, garrisons, artillery positions, and supply depots.

**Iran**

Iran's air strategy has been defined in part by a desire to limit losses and a recognition that its Air Force may not have a reliable source of resupply after prewar stockpiles of jet fuel and spare parts have been depleted. Because the Air Force has been forced to conserve its resources, it has selected targets carefully and used only a few aircraft on each mission. During the early days of the war, it focused almost all of its offensive power against targets inside Iraq, but it did provide some air support to its ground forces attempting to block the Iraqi invasion.

***Strategic Bombing.*** The size and number of Iranian bombing missions against targets in the Baghdad area have mirrored the overall decline in Iranian air capabilities. At the beginning of the war, the Baghdad missions reportedly involved several sorties per day of F-4 formations of four aircraft each. Soon each attacking group was reduced to two or three aircraft and the attacks became less frequent—only one a day and then only one every few days. As fuel shortages have worsened and maintenance problems increased, weeks have passed between attacks on Baghdad.

25X1

Iran almost certainly has used its most experienced, best trained pilots for the raids into Iraq, and they have demonstrated considerable proficiency.

25X1D

25X1D

25X1D

25X1

25X1

***Ground Support.*** Iran's Air Force has a mixed record of supporting its troops at the front. It provided only sporadic close air support during the early days of the war, as it concentrated its resources against targets in Iraq.

X1

or de

X1

In early October, Iranian jet fighters and helicopter gunships began to harass and disrupt Iraqi ground force operations. During that month, however, the Air Force often directed about one-fourth of its total daily sorties to the support of troops in the central border area and in Khuzestan.

X1

Iraqi military reports indicate that the Iraqis have been particularly concerned about the effectiveness of Iranian Army helicopter gunships, especially against armor. The Iraqis have been forced to employ new tactics—the stationing of forward reconnaissance and ambush teams—to blunt the Iranian helicopter threat.

25X1

***Strategic Air Defense.*** Although Iran has an elaborate ground-based air defense organization equipped with modern radars and surface-to-air missiles from the United States and Europe, it still relies heavily on its fighter aircraft for strategic air defense. Poor maintenance and inadequate training have limited the effectiveness of Iran's HAWK and Rapier batteries. Iran apparently was surprised by the massive Iraqi air assault on the first day of the war,

25X1

25X1

25X1

After overcoming their surprise on the first day of the war, Iranian air defense forces apparently improved their effectiveness and have been responsible for downing at least 90 Iraqi aircraft. We are unaware of how many kills each system has achieved, but both

25X1

25X1

The Air Force has maintained comprehensive, around-the-clock defensive combat air patrols over Iran, extending the duration of each fighter mission by aerial refueling. Iran has made maximum use of the few F-14 fighter aircraft still operational by assigning them high-altitude reconnaissance and interceptor coordination missions; training and maintenance problems preclude an effective combat role for the F-14s.

25X1

The ground-based and airborne systems have had mixed results against the Iraqis. For example, at

25X1

But later in October, two pairs of F-5s from the same base failed in their attempt to intercept a bombing mission,

25X1



25X1

X1

military facilities in the area were therefore undefended. Other reports indicate that poor coordination between Iranian air and air defense units has resulted in aircraft losses to friendly ground fire and that Iraqi use of chaff has effectively increased confusion among air defense forces.

X1

**The Naval War**

Naval operations have played a minor role in the evolution of the war and, except at the naval base at Khorramshahr, damage to naval facilities has been light. Nevertheless, Iran's ability to operate at will throughout the Gulf and, if it chooses, to close the Strait of Hormuz to shipping, highlights Iraq's relative naval weakness and permits Iran to use one of its few military advantages to gain maximum psychological and political impact. Iran recognizes that Iraq's tiny Navy, largely devoted to coastal defense, is no serious challenge, despite a dramatic deterioration in Iranian naval capability since the revolution.

Neither side has seen much naval combat since the first week of the war, when both used fighter-bombers to attack enemy ships and facilities. Even before the border conflict burst into war, conflicting claims to the Shatt al Arab estuary led to clashes between aircraft and gunships, and an Iraqi aircraft destroyed at least one small Iranian gunboat on the Shatt before 22 September.

X1

Both sides claim that their aircraft have destroyed enemy boats—a claim probably based on strafing attacks that may have caused only light damage. Early in the war, Iran claimed to have sunk several Iraqi Osa missile patrol boats, but at least 11 of Iraq's 12 Osas

X1

X1

X1

25X1

Iraqi aircraft apparently raided Iran's naval facility at Khark Island and its bases at Bushehr and Bandar Abbas and, with the help of ground fire, destroyed the naval facility at Khorramshahr, which the Iraqis believed they had to eliminate to establish control of the Shatt. The ruins of the Khorramshahr facility, however, remain in Iranian hands.

25X1

The two navies apparently have had only one major clash during the war, in late November, when an Iranian air and naval force raided an Iraqi oil shipping terminal. Both sides apparently inflicted damage on enemy ships, and one Iranian missile patrol boat was sunk. At the beginning of the war, Iraq dispersed most of its gunboats and missile patrol boats in waterways near the Umm Qasr and Basrah Naval Bases. For its part, the Iranian Navy has attempted to conduct active patrolling throughout the Gulf. In the north, Iranian ships have monitored traffic heading to or from Iraqi ports, and in the south they have supported and guarded islands claimed by Iran and have carried out surveillance operations in the Strait of Hormuz.

25X1

Iran's Navy, operating behind its facade of unchallenged supremacy, has effectively denied use of the Gulf to Iraqi shipping and has influenced foreign powers to respond cautiously to the crisis. By all modern standards, however, the Navy lacks significant striking power and could not successfully resist a serious challenge by any major naval force.

25X1

Iran's major combatants have suffered from numerous equipment problems throughout the war and have curtailed some of their patrolling because of maintenance problems and a shortage of fuel. At least two of Iran's destroyers have been unable to leave their base at Bandar Abbas, and several of the guided-missile frigates have had major electronic, radar, and fire-control problems that have forced them back to base for repair. By mid-October the ships stationed at the northern bases were critically short of fuel, and merchant tankers had to be requisitioned to help refuel ships in queue.

25X1

## Prospects

### The Limits of Iraqi Military Power

Despite its successes thus far, the Iraqi military probably cannot apply enough pressure to achieve Baghdad's ambitious strategic objectives in the near future. These objectives are recognition of Iraqi claims to border territories and the Shatt al Arab waterway, an Iranian pledge to refrain from interfering in Arab affairs, and the return of three Gulf islands to Arab control. Nevertheless, we expect that Iraq will continue its airstrikes against economic targets deep inside Iran and possibly make further ground advances into Khuzestan. Certainly any negotiations Iraq might enter or concessions it might make now or in the next several months would be from a position of military superiority. 25X1

### Iraqi Operations in Khuzestan

Iraqi ground forces clearly plan to hold their positions in Khuzestan for some time, and in late November Baghdad reportedly decided to refrain from further advances this winter. The Iraqis are unlikely to open a major new offensive into Khuzestan until they seize Abadan and the salient northwest of Ahvaz. Taking Abadan would release at least four armored brigades for operations elsewhere, and taking the salient would open a major supply route to Ahvaz. Given Baghdad's conservative strategy, however, even the relatively minor impact of winter weather on operations may deter further Iraqi advances into Khuzestan until spring. From late November until May, winter conditions will hamper ground operations, occasionally precluding cross-country movement of tracked vehicles in parts of Khuzestan. Iraq has constructed at least two major roads from its border to Ahvaz, reportedly has built an airfield in Iran, and has issued winter gear to its deployed forces; these measures leave no doubt that it expects to remain in Khuzestan for some time.

X1

Iraqi ground forces could contribute to the achievement of Baghdad's strategic objectives by taking control of the major lines of communication in Khuzestan, an objective that they probably could largely accomplish within a few months if they chose to do so. Such a move would to some extent add to Iran's domestic difficulties, and it would be mandatory if Iraq sought to establish an autonomous Khuzestan. Such control would entail advances north and south of Dezful, around Ahvaz, and to the north of Bandar-e Khomeini, pushing as far as the foothills in eastern Khuzestan. Indeed, in November, Iraqi troop movements suggested that an advance toward Bandar-e Khomeini was being considered. Because Iranian forces have been reinforcing Dezful, however, the cost to Iraq of taking the roads north of that city will be significantly greater. The Iraqis probably will not attempt to capture the cities themselves—to do so using present tactics would take several months, and to accelerate the effort would greatly increase Iraqi casualties. 25X1

### Iranian Ground Operations

Iran's ground forces lack the capability to reverse the course of the war in the next several months by launching a major counterattack. As the war continues, however, Iran probably will seek to frustrate any Iraqi attempts to advance by reinforcing the threatened cities in Khuzestan with Revolutionary Guards and additional combat groups formed by combining small units from several divisions. These reinforcements might be able to carry out successful local counterattacks if Iranian commanders were to mass their forces against isolated Iraqi units. 25X1

### Air Operations

The Iraqi Air Force will be capable of conducting raids deep into Iran for many months, even if Tehran obtains foreign assistance to reverse the decline in Iranian air and air defense capabilities. Iraq probably will retain the capability to destroy Iran's petroleum refining capacity and thereby deny fuel for heating, cooking, agriculture, and industry. Such denial would create extreme domestic hardship. Iraq has not continued the aggressive air strategy employed during October, but increased air activity in late November may presage a renewed effort to put pressure on the Iranian population. Iran's Air Force will continue to be capable of conducting damaging strikes on Iraq unless the Iraqis decide to systematically neutralize Iranian airpower. 25X1

25X1



25X1

25X1

**Naval Operations**

Unless Iraq can acquire access to air and sea bases near the Strait of Hormuz, it has no hope of forcing Iran to reopen that waterway to Iraqi shipping. Even if such access were granted, destroying Iranian seapower would be costly and difficult and probably would be contingent upon neutralizing the Iranian Air Force.

**Resupply**

Iraq probably can hold its current positions indefinitely, despite the apparent Soviet refusal to provide major military equipment and spare parts. We expect continued selected shortages of ground force equipment to occur, however, and the Iraqi Air Force probably is now incurring shortages that are grounding some aircraft. Restrictions on artillery fire in some sectors in late November may indicate current or anticipated shortages of ammunition. HOT antitank missiles, antiaircraft weapons, ammunition, parts for French helicopters, and some medical supplies are or have been in short supply. French resupply efforts already have alleviated some of these shortages, and Iraq also has access to other Western and some East European and Third World suppliers. Even if the Strait of Hormuz remains closed to ships bound for Iraqi ports, Iraq has a number of overland routes that could fill shortages in most critical categories of supply. Lack of full Soviet support, however, probably will inhibit an Iraqi decision to step up sieges of Ahvaz and Dezful with heavy artillery, tanks, and airstrikes or to advance farther into Khuzestan.

25X1

25X1

Because Iran has not yet acquired a reliable foreign source for its most critically needed supplies—jet fuel as well as spare parts for its aircraft and armored vehicles—such needs are likely to remain largely unsatisfied during the next few months. It has, however, taken advantage of the willingness of a few countries—North Korea, Libya, and Syria, for example—to provide small amounts of supplies, ammunition, and small arms

The delivery of US-made spare parts to Iran would have little immediate impact on the war, other than boosting Iranian morale. Deliveries sustained over a period of several months probably would allow Iran's Air Force to increase air sorties to near the level of the beginning of the war—150 per day—and to maintain about that level. Resupply of munitions and spare parts to the ground forces would enable combat units to maintain their resistance at the current level of intensity but would not appreciably increase Iran's capacity to escalate the war. Moreover, Iran's domestic logistics system is notoriously inefficient and, even if large amounts of equipment were delivered, much of it would probably be lost, misdirected, or delayed.

25X1

## Appendix A

## Balance of Forces

Our lack of detailed information on each side's losses of personnel and major items of equipment precludes a precise estimate of the current balance of forces. Our analysis does, however, support some generalizations about aircraft, armor, naval vessels, and manpower.

25X1

### Aircraft

Although Iran's pilots and aircraft still have a qualitative advantage, Iraq retains more than a 2-to-1 advantage in the number of modern aircraft operational. On the 12th day of combat, Iraq reportedly had lost 50 fighters—a rate of four per day. We believe this rate represents a maximum and that since then the average loss rate probably has been between one and two per day.

25X1

90 aircraft had been lost by early November; if true, this figure would indicate a rate of about one per day since early October, or 110 aircraft lost by early December. If, as is likely, most of Iraq's losses were MIG-23s, SU-20/22s, and newer MIG-21s, then about 260 modern aircraft would remain in early December.

25X1

25X1

25X1

as of late October Iran had lost at least 90 aircraft and had some 100 combat fighters still operational. About 15 of the hundred probably were F-14s, the remainder F-4s and F-5s.

25X1

The ratio of operational aircraft is even more favorable to Iraq if we include in the balance 210 older or obsolete fighters and combat-capable trainers. Iraq has lost at least one, and possibly as many as five, of its 30 medium bombers; Iran has no medium bombers.

25X1

### Armored Forces

Overall, Iraq has at least a 3-to-1 advantage in operational tanks and nearly a 2-to-1 advantage in operational armored personnel carriers. These overall ratios are misleading because across the entire front Iraq has enjoyed more than a 6-to-1 advantage in tanks. Moreover, Iraq has far superior maintenance and resupply capabilities, and as many as 50 tanks and 200 APCs remain in the ready reserve. (Over 50 tanks and over 160 APCs already have been withdrawn from the reserve.) In addition, Iraq has some 450 T-54/55 tanks, which have been replaced by T-62s in operational units but probably are still available for use at the front.

25X6

25X1

Although we do not know how many tanks and APCs Iraq has lost—at least 200 reportedly have been lost, primarily because of mechanical problems—it began the war with 2,500 tanks and 2,100 APCs in operational units. Iran began the war with about 2,000 tanks and nearly 3,000 APCs, of which we estimate that only 40 percent were operational. We believe that Iran's armor losses have been heavier than Iraq's; Iran may have lost more than 400 tanks.

25X1

### Naval Forces

Iran has seven major combatants and nine guided-missile patrol boats (one probably was sunk in late November). Iraq has no major combatants, 12 OSA guided-missile patrol boats (one may have been lost in the war), and less than half as many small patrol craft and support ships as Iran. Both sides also have lost a few small patrol craft to enemy aircraft in the northern Gulf and the Shatt al Arab estuary. Although Iran claimed to have sunk several OSAs at the war's outset, at least 11 of the 12 were still afloat in mid-October.

25X1

25X1

25X1

25X1

### Manpower

Iraq's regular armed forces numbered 240,000 at the outbreak of hostilities, with 250,000 trained reserve and active-duty paramilitary forces. In addition, most of the estimated 200,000 members of Iraq's irregular People's Army have received at least some military



25X1

training. Iran's regular armed forces numbered about 150,000 men at the outset. They were supplemented by an estimated 50,000 to 85,000 lightly armed Revolutionary Guards.

25X1

Iraq reportedly had 4,000 dead as of early November; we believe this number to be a maximum—given the low intensity of combat and the low losses occasionally reported by Iraqi units—but we cannot verify this. According to another report, Iran too had lost 4,000 as of mid-November. No corroborating evidence is available.

25X1

## Appendix B

## Iraq's Capability to Neutralize the Iranian Air Force

For the present, we expect Iraq to continue its apparently unsystematic attacks on a variety of Iranian installations, including air facilities. Although this strategy will gradually reduce the effectiveness of the Iranian Air Force, we believe that Iraq ultimately will recognize that systematic, sustained attacks are necessary to neutralize Iranian airpower.

25X1

Such neutralization not only would deprive Tehran of its only means of directly striking the Iraqi heartland and attacking the oil facilities of other Gulf states, but also would improve Iraq's chances of reopening the Strait of Hormuz, its economic lifeline. Moreover, achieving air superiority would enable Iraq to launch virtually unrestricted attacks on key installations almost anywhere in the country.

25X1

Recognizing the devastating consequences of destroying Iranian airpower, Iraq struck all of Iran's major airfields in a surprise attack at the outset of the war. Iraqi leaders reportedly expected that attack to bring the Iranian Air Force to its knees. Neither the initial strikes nor subsequent ones were of sufficient magnitude or duration, however, to realistically be expected to disable the Iranian Air Force.

X1
X1
X6
X1

**A Systematic Counter-Air Strategy**

The Iraqi Air Force probably could destroy the effectiveness of the Iranian Air Force through concentrated attacks against specific air facilities repeated daily over a two- or three-week period. To be effective, the strategy should simultaneously pursue several objectives:

- To force Iranian aircraft to increase the intensity of their air operations, consuming their dwindling supplies of fuel and spare parts. (Iranian air capabilities, even if unchallenged, will gradually decay, unless reliable sources of fuel and spare parts can be obtained.)
- To attack the seven base-level maintenance facilities available for F-4, F-5, and F-14 aircraft. Loss of these facilities would severely constrain Iran's ability to sustain air operations, probably within days. Systems that give some of the Iranian aircraft a qualitative edge over Iraq's aircraft would go unrepaired, increasing the Iraqis' ability—and perhaps their willingness—to engage in dogfights.
- To attack the two major logistics depots and transshipment terminals in the Tehran area. This would compound the already severe difficulties that Iran has experienced in locating spares.
- To attack POL storage facilities, especially at each of the seven or eight major airfields. With the Iraqi invasion of Khuzestan, Iran lost its only facility that was producing jet fuel. Iran has directed three other refineries to produce fuel, but they also have been under attack.
- To attack six air defense control centers—two that perform national-level control and four that perform sector-level control of western Iran. Loss of even some of these centers would fragment the control network and complicate air defense, thereby reducing Iran's probability of intercepting Iraqi bombers.
- To destroy Iranian tanker aircraft. Loss of these would immediately reduce the range and duration of Iranian fighter-bomber and interceptor missions.
- To destroy Iranian aircraft in aerial combat. Because the Iraqis believe their aircraft and possibly even their pilots are inferior to those of Iran, they have deliberately avoided air-to-air engagements whenever possible. Baghdad probably could offset this inferiority to some extent by taking greater advantage of its superior number of interceptors, especially those operating in Iraqi airspace.



25X6

- To disable runways at the seven or eight major Iranian airbases. This is probably the most difficult method of putting an airfield out of commission, because damage can be repaired within days—sometimes hours. Cratering of runways apparently was responsible for the cessation of flight operations of fighter aircraft at one Iranian airfield during the opening phase of the war. After the attacks abated, however, flight operations resumed. One of these airfields is a high-priority target because it is being used to resupply beleaguered Iranian ground forces on a major Iraqi approach to Dezful. Because runway cratering would require numerous daily strikes to be effective, this tactic initially may be feasible only against airfields that are close to Iraq's border.

25X6

We believe that the strategy described above would be effective even if the Iraqis did not attack aircraft on the ground. (Most of these aircraft are protected by hardened shelters that would be difficult to destroy.) Only the primary airfields would have to be attacked, because alternate airfields lack sufficient support facilities or personnel for sustained flight operations.

25X1

25X1

This strategy could not halt Iranian air activity completely within three weeks, but we believe that it would significantly reduce the direct threat to Iraq and establish Iraqi air superiority—at least over Iraq and western Iran. To undertake this strategy would require a shift from Iraq's policy of limiting damage and conserving resources to one of active offense, in which Iraq would have to accept the probability of greater losses.

25X1

**Iraqi Bomber Force**

Iraq's inventory of ground-attack aircraft would be adequate for this type of air offensive. Iraq began the war with 134 modern fighters (MIG-23s and SU-20/22s) and 30 medium bombers (TU-22s, TU-16s, and IL-28s). All of these aircraft can reach the major Iranian air facilities. In addition, the Air Force has 200 to 240 MIG-21 interceptors that probably could be configured for ground-attack missions against targets close to Iraq's border. We estimate that about 260 modern fighters and fighter-bombers and 25 to 29 medium bombers remained by early December. In addition, some 210 older or obsolete MIGs, Hawker Hunters, SU-7s, and combat-capable trainers are available for short-range ground-attack missions.

25X1
25X1

**Ordnance**

Iraq is not known to have any specialized ordnance for attacking airfields—such as runway penetrators and cluster bombs—a deficiency that in part explains the general ineffectiveness of the attacks so far. In addition,

25X1
25X6
25X1
25X1

High-explosive and incendiary or napalm bombs have been used with varying results. Bombs in the Iraqi inventory range in size from 50 to 500 kilograms, and 1,000-kilogram bombs are available for the medium bombers.

25X1
25X1
25X6

**Iranian Air Defenses**

Although Iranian interceptors would take a toll of Iraqi bombers—primarily because Iran's aircraft and weapons are superior—a number of factors would work in Iraq's favor:

- The Iranian Air Force probably now has some 100 aircraft operating, and the number of interceptor sorties that Iran can generate is falling gradually. These aircraft are spread ever more thinly over the country.

25X1
25X1

- For attacks on several of the Iranian airfields, Iraqi aircraft could remain at low altitude throughout the mission, significantly reducing the probability of detection and engagement. Two of the airfields can now be struck with artillery.

- For attacks on airfields deeper in Iran, Iraqi interceptors could accompany the bombers on high-altitude portions of their missions.

25X6

25X1

X1

X6

The attacking Iraqi aircraft probably would incur relatively few losses from the ground-based defenses at Iranian airfields. Each major airfield has at least some antiaircraft artillery, and a few are heavily defended by both AAA and surface-to-air missiles. Iranian AAA has been relatively ineffective against high-speed aircraft flying at low altitude, and the effectiveness of Iranian HAWK batteries has been much reduced by the poor training of crews and inadequate maintenance.

X1

X1

X6

25X1

25X1

Approved For Release 2006/03/17 : CIA-RDP81B00401R000500030002-5