



## Introduction



Although the number of international terrorist incidents has dropped in recent years and more terrorists are being arrested and tried for their crimes, international terrorism remains a serious, ongoing threat around the world. Individual bombings and armed attacks, while fewer in number than last year, continue to cause horrendous casualties. Moreover, domestic--rather than international--terrorism continues to beset countries such as Algeria, where numerous brutal massacres of ordinary citizens have been perpetrated by terrorists during the past five years.

During 1997 there were 304 acts of international terrorism worldwide, an increase of eight from the previous year. This figure is one of the lowest annual totals recorded since 1971. More than one-third of the year's attacks occurred in Colombia, 90 of which were low-level bombings of oil pipelines that caused damage but no casualties.

Countering the terrorist threat remains a high priority for the United States. We have developed a three-part counterterrorist policy that has served us well over the years:

**First**, make no concessions to terrorists and strike no deals.

The United States has learned over time that this policy works. We supported the Government of Peru for steadfastly refusing to give in to demands made by terrorists who held 72 hostages in the Japanese Ambassador's residence in Lima for four months last year. The government's unyielding refusal to release convicted terrorists from prison allowed it time to plan and execute a successful rescue of the hostages in April.

**Second**, bring terrorists to justice for their crimes.

Continuing a positive trend of recent years, more terrorists are being apprehended, put on trial, and given severe prison terms for their crimes; several important trials and convictions of international terrorists occurred in 1997. The terrorists who planned and helped carry out the February 1993 World Trade Center bombing were convicted of the crime in New York. The terrorist who murdered two Central Intelligence Agency (CIA) employees outside CIA Headquarters in January 1993 was found guilty by a jury in Virginia. A highly publicized judgment in Berlin demonstrated in open court that the Government of Iran follows a deliberate policy of "liquidating" its political opponents abroad. The notorious "Carlos the Jackal" was convicted in Paris of three murders that he committed there 23 years ago. A terrorist who attempted to bomb the US Embassy in Jakarta, Indonesia, by launching rockets into the complex in 1986 was found guilty by a jury in Washington, DC.

**Third**, isolate and apply pressure on states that sponsor and support terrorism to force them to change their behavior.

The Secretary of State has designated seven countries as state sponsors of terrorism: Cuba, Iran, Iraq, Libya, North Korea, Sudan, and Syria. A range of bilateral and multilateral sanctions have been imposed and remain in place to discourage these countries from continuing their support for international terrorism.

In November, President Clinton signed an executive order imposing additional, comprehensive economic sanctions on Sudan for its sponsorship of international terrorism, its efforts to destabilize

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neighboring countries, and its abysmal human rights record. The new sanctions ban all US exports to Sudan, impose a total ban on imports from Sudan, and prohibit US investment there.

President Clinton signed the Iran and Libya Sanctions Act of 1996, which deprives foreign companies of certain economic benefits in the United States if they invest in the development of Iran's and Libya's energy sectors. The Act's objective is to deny revenue to these state sponsors in advance of evidence that those states are prepared to change their behavior. We believe that sponsorship and support of international terrorist activities should be discouraged by the international community, not rewarded.

In March, July, and November, the United Nations Security Council reviewed Libyan compliance with resolutions that require Libya to surrender the two named suspects in the Pan Am 103 bombing to US or UK authorities for trial; cooperate with the US, French, and British investigations into the attacks against Pan Am 103 and UTA Flight 772; pay appropriate compensation; and renounce and cease its support for international terrorism. The Security Council found that Libya was not in compliance. The sanctions that were imposed on Libya for its non-compliance remain in place, the November review marking the 17th time the sanctions have been reviewed and renewed for another 120 days.

In October, Secretary of State Albright formally designated 30 foreign terrorist organizations under the Antiterrorism and Effective Death Penalty Act of 1996, which makes it illegal for US institutions and citizens to provide funds or other forms of material support to such groups. The law also makes members and representatives of those terrorist groups ineligible for US visas and subject to exclusion from the United States. Moreover, US financial institutions are required to block the funds of those groups and of their agents and to report the blocking action to the Department of the Treasury. A complete list of the designated foreign terrorist organizations is included in appendix B.

At the Denver Summit of the Eight held in June, leaders from the United States, Canada, France, Germany, Italy, Japan, Russia, and the United Kingdom made significant progress in countering the terrorist threat:

- The Eight worked with other UN General Assembly members to complete the work on the Convention for the Suppression of Terrorist Bombings, a new counterterrorism instrument that was initiated by the Eight in December 1996. This Convention fills an important gap in international law by creating a framework for addressing terrorist bombing attacks anywhere in the world. (The United States signed the Convention on 12 January 1998.)
- The Eight have launched an international campaign to promote by the year 2000 the universal adoption and ratification of the existing international terrorism conventions.
- The Eight continue to promote improved international standards for airport security, explosives detection, and vehicle identification. Related experts' meetings, information exchanges, and multilateral diplomacy have sought to enhance the protection of public transportation against terrorism.
- Agreement among the Eight to promote stronger domestic laws and controls over the manufacture, trading, and transport of explosives will reduce the threat to our citizens from terrorist attacks.

The United States has trained more than 20,000 foreign law enforcement officials from more than 90 countries in such areas as airport security, bomb detection, maritime security, VIP protection, hostage rescue, and crisis management. We also conduct an active research and development program to use modern technology to defeat terrorists.

As President Clinton declared in November following the brutal terrorist attack in Luxor, Egypt:

"Once again, we are reminded of a painful truth: Terrorism is a global threat. No nation is immune. That is why all nations must redouble our commitment to fight this scourge together."

### Legislative Requirements

This report is submitted in compliance with Title 22 of the United States Code, Section 2656f(a), which requires the Department of State to provide Congress a full and complete annual report on terrorism for those countries and groups meeting the criteria of Section (a)(1) and (2) of the Act. As required by legislation, the report includes detailed assessments of foreign countries where significant terrorist acts occurred and countries about which Congress was notified during the preceding five years pursuant to Section 6(j) of the Export Administration Act of 1979 (the so-called terrorism list countries that have repeatedly provided state support for international terrorism). In addition, the report includes all relevant information about the previous year's activities of individuals, terrorist organizations, or umbrella groups known to be responsible for the kidnapping or death of any US citizen during the preceding five years and groups known to be financed by state sponsors of terrorism.

In 1996 Congress amended the reporting requirements contained in the above-referenced law. The amended law requires the Department of State to report on the extent to which other countries cooperate with the United States in apprehending, convicting, and punishing terrorists responsible for attacking US citizens or interests. The law also requires that this report describe the extent to which foreign governments are cooperating, or have cooperated during the previous five years, in preventing future acts of terrorism. As permitted in the amended legislation, the Department of State is submitting this information to Congress in a classified annex to this unclassified report.

### Definitions

No one definition of terrorism has gained universal acceptance. For the purposes of this report, however, we have chosen the definition of terrorism contained in Title 22 of the United States Code, Section 2656f(d). That statute contains the following definitions:

- The term "terrorism" means premeditated, politically motivated violence perpetrated against noncombatant(1) targets by subnational groups or clandestine agents, usually intended to influence an audience.
- The term "international terrorism" means terrorism involving citizens or the territory of more than one country.
- The term "terrorist group" means any group practicing, or that has significant subgroups that practice, international terrorism. The US Government has employed this definition of terrorism for statistical and analytical purposes since 1983.

Domestic terrorism is probably a more widespread phenomenon than international terrorism. Because international terrorism has a direct impact on US interests, it is the primary focus of this report. Nonetheless, the report also describes, but does not provide statistics on, significant developments in domestic terrorism.

(1) For purposes of this definition, the term "noncombatant" is interpreted to include, in addition to civilians, military personnel who at the time of the incident are unarmed and/or not on duty. For example, in past reports we have listed as terrorist incidents the murders of the following US military personnel: the 19 airmen killed in the 1996 bombing of the Khubar Towers housing facility in Saudi Arabia; Col. James Rowe, killed in Manila in April 1989; Capt. William Nordeen, US defense attache killed in Athens in June 1988; the two servicemen killed in the La Belle discotheque bombing in West Berlin in April 1986; and the four off-duty US Embassy Marine guards killed in a cafe in El Salvador in June 1985. We also consider as acts of terrorism attacks on

military installations or on armed military personnel when a state of military hostilities does not exist at the site, such as the bombings against US bases in Europe, the Philippines, and elsewhere.

#### Note

Adverse mention in this report of individual members of any political, social, ethnic, religious, or national group is not meant to imply that all members of that group are terrorists. Indeed, terrorists represent a small minority of dedicated, often fanatical, individuals in most such groups. It is those small groups--and their actions--which are the subject of this report.

Furthermore, terrorist acts are part of a larger phenomenon of politically inspired violence, and at times the line between the two is difficult to draw. To relate terrorist events to the larger context, and to give a sense for the conflicts that spawn violence, this report will discuss terrorist acts as well as other violent incidents that are not necessarily international terrorism.

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## The Year in Review

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### The Year in Review

During 1997 there were 304 acts of international terrorism, eight more than occurred during 1996, but one of the lowest annual totals recorded since 1971. The number of casualties remained large but did not approach the high levels recorded during 1996. In 1997, 221 persons died and 693 were wounded in international terrorist attacks as compared to 314 dead and 2,912 wounded in 1996. Seven US citizens died and 21 were wounded in 1997, as compared with 23 dead and 510 wounded the previous year.

Approximately one-third of the attacks were against US targets, and most of those consisted of low-level bombings of multinational oil pipelines in Colombia. Terrorists there regard the pipelines as a US target.

The predominant type of attack during 1997 was bombing; the foremost target was business related.

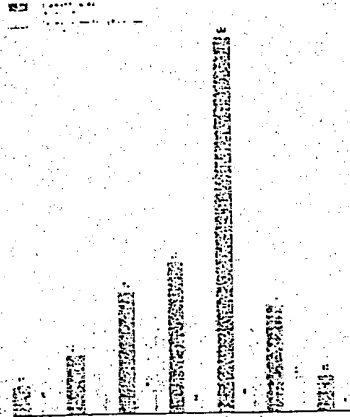
The following were among the more significant attacks during the year:

- The deadliest terrorist attack ever committed in Egypt occurred on 17 November when six gunmen entered the Hatsheput Temple in Luxor and for 30 minutes methodically shot and knifed tourists trapped inside the Temple's alcoves. Fifty-eight foreign tourists were murdered, along with three Egyptian police officers and one Egyptian tour guide. The gunmen then commandeered an empty tour bus and fled the scene, but Egyptian security forces pursued them and all six were killed.
- On 18 September terrorists launched a grenade attack on a tour bus parked in front of the Egyptian National Antiquities Museum in Cairo. Nine German tourists and their Egyptian busdriver were killed, and eight others were wounded.
- On 12 November four US citizens, employees of Union Texas Petroleum, and their Pakistani driver were shot and killed when the vehicle in which they were riding was attacked 1 mile from the US Consulate in Karachi.
- The Government of Iran conducted at least 13 assassinations in 1997, the majority of which were carried out in northern Iraq.
- On 30 July two suicide bombers attacked a market in Jerusalem. Sixteen persons--including a US citizen--were killed, and 178 were wounded.
- On 4 September three suicide bombers attacked a pedestrian mall in central Jerusalem, killing seven persons--including a 14-year-old US citizen--and injuring nearly 200 persons.
- Frank Pescatore, a US geologist and mining consultant working in Colombia, was kidnapped by the Revolutionary Armed Forces of Colombia in December 1996 and later killed by his captors; his body was discovered 23 February 1997.
- On 30 March unknown assailants threw four grenades into a political demonstration in Phnom Penh, killing 19 persons and wounding more than 100 others. Among the injured were a US citizen from the International Republican Institute, a Chinese journalist from the Xinhua News Agency, and opposition leader Sam Rainsy, who led some 200 supporters of his Khmer Nations Party in the demonstration against the governing Cambodian People's Party.
- In April, in Bosnia and Herzegovina, police discovered and defused 23 landmines under a bridge that was part of Pope John Paul II's motorcade route in Sarajevo, several hours before

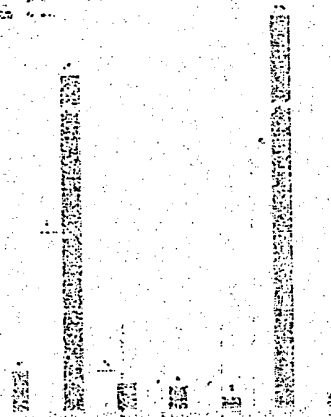
the Pope's arrival.

- On 30 July, in Colombia, National Liberation Army terrorists bombed the Cano Limon-Covenas oil pipeline in Norte Santander. They had wrapped sticks of dynamite around the pipes of the pump, which caused a major oil spill on detonation. Pumping operations were suspended for more than a week, resulting in several million dollars in lost revenue.

Number of Terrorist Attacks, 1992



Number of International Terrorist Attacks, 1992



In a notable counterterrorism achievement, Peruvian security forces staged on 22 April a raid on the Japanese Ambassador's residence in Lima where members of the Tupac Amaru Revolutionary Movement (MRTA) were holding 72 hostages for four months. All but one of the hostages were freed; after being shot during the rescue, that one suffered a heart attack and subsequently died. All the MRTA hostage takers were killed. The United States strongly supported the Government of Peru's steadfast refusal to make any concessions to the terrorists holding the hostages during the four-month ordeal.

Terrorists were brought to trial in various countries throughout the year:

- In April a judgment by a court in Berlin found that the highest levels of Iran's political leadership followed a deliberate policy of murdering political opponents who lived outside the country. The court found four defendants guilty in the 1992 murders of four Iranian Kurdish opposition figures in Berlin's Mykonos restaurant. Three of the four convicted were members of the Lebanese Hizballah organization; the fourth was an Iranian national. The court made clear that other participants in the murders had escaped to Iran, where one of them was given a Mercedes for his role in the operation. In March 1996 a German court had issued an arrest warrant for former Iranian Minister of Intelligence and Security Ali Fallahian in this case.
- On 18 November the trial of five defendants suspected in the 1986 La Belle discotheque bombing opened in Berlin. Two US soldiers, Sgt. Kenneth Ford and Sgt. James Goins, were killed in the attack along with a Turkish citizen, and some 200 other persons were wounded, including 64 US citizens. The United States believes the attack was sponsored by Libya. The trial is expected to last two years.
- The notorious terrorist Illich Ramirez Sanchez, known as "Carlos the Jackal," was convicted in December by a French court for the 1975 murders of two French investigators and a Lebanese national. Although Ramirez had proclaimed during the trial that "There is no law for me," the court sentenced him to life in prison.

Several notable trials of international terrorist suspects in the United States also took place during

the year:

- On 12 November a federal jury in Manhattan convicted Ramzi Ahmed Yousef of directing and helping to carry out the World Trade Center bombing in 1993. Eyad Mahmoud Ismail Najim, who drove the truck that carried the bomb, was also found guilty. Yousef was extradited to the United States from Pakistan in February 1995; Najim was arrested in Jordan in August of that year pursuant to an extradition request from the United States, and he was returned to the United States. (In January 1998 Yousef was sentenced to 240 years in solitary confinement for his role in the World Trade Center bombing. He also received an additional sentence of life imprisonment for his previous conviction in a terrorist conspiracy to plant bombs aboard US passenger airliners operating in East Asia.)
- In June 1997 US authorities arrested Mir Aimal Kansi, the suspected gunman in the attack on 25 January 1993 outside Central Intelligence Agency (CIA) Headquarters that killed two CIA employees and wounded three others. Kansi was apprehended abroad, remanded into US custody, and transported to the United States to stand trial. In November a jury in Fairfax, Virginia, found Kansi guilty of the capital murder of Frank A. Darling, the first degree murder of Lansing H. Bennett, and the malicious wounding of Nicholas Starr, Calvin R. Morgan, and Stephen E. Williams, as well as five firearms charges. (In January 1998, Kansi was sentenced to death.)
- A member of the Japanese Red Army terrorist organization, Tsutomu Shiroasaki, was turned over to US authorities in 1996 in an Asian country and brought to the United States to stand trial for the improvised mortar attacks against the US Embassy in Jakarta, Indonesia, on 14 May 1986. The projectiles landed on the roof and in a courtyard but failed to explode. In November a US federal court in Washington, DC, found Shiroasaki guilty of all charges, including attempted murder of US Embassy personnel and attempting to harm a US Embassy. (In February 1998 Shiroasaki was sentenced to a 30-year prison term.)

The attached terrorist incidents are:

1. 1/12/98

2. 1/12/98

3. 1/12/98

4. 1/12/98

5. 1/12/98

6. 1/12/98

There were 13 international terrorist incidents in the United States during the year, 12 involving letter bombs:

- In January a total of 12 letter bombs with Alexandria, Egypt, postmarks were discovered in holiday greeting cards mailed to the United States. On two separate days during January, nine letter bombs were discovered in the Washington, DC, and United Nations offices of the Saudi-owned *al-Hayat* newspaper. In addition, three letter bomb devices were sent to the federal prison in Fort Leavenworth Kansas. None of the letter bombs detonated, and there were no public claims of responsibility. A similar device mailed to the *al-Hayat* office in

London on 13 January did explode, injuring two persons. Subsequently, three more devices were found. The incidents are under investigation by the FBI.

- On 23 February a Palestinian gunman entered the observation deck at the Empire State building in New York City and opened fire on tourists, killing a Danish man and wounding visitors from the United States, Argentina, Switzerland, and France before turning the gun on himself. A note carried by the gunman indicated that this was a punishment attack against the "enemies of Palestine."

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## Europe and Eurasia Overview

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### Europe and Eurasia Overview

The number of terrorist incidents in Western Europe remained low during 1997. Terrorist acts by the Kurdistan Workers' Party (PKK) declined in Germany as PKK leader Ocalan attempted to get out from under Germany's tough sanctions on terrorist organizations.

Spain and France continued to cooperate in bringing to justice members of the Basque Fatherland and Liberty (ETA) terrorist organization, while Spanish authorities have offered to negotiate with Basque groups that foreswear violence. Spanish authorities arrested, tried, and jailed the leadership of the ETA's political wing, the Herri Batasuna.

Although no major terrorist acts took place in France, security forces maintained a high public visibility as a precaution against repeats of the deadly 1996 bombing of a commuter train in Paris.

In Germany, acts of terrorist violence attributable to the PKK declined, although the PKK remains actively engaged in criminal activities, principally extortion and aggravated assault. A judgment by a court in Berlin in April in the so-called Mykonos trial found that the highest levels of Iran's political leadership followed a deliberate policy of murdering political opponents who lived outside the country. In March 1996 a German court had issued an arrest warrant for former Iranian Minister of Intelligence and Security Ali Fallahian in this case.

In the United Kingdom, the Irish Republican Army (IRA) announced another cease-fire, thereby making it possible for Sinn Fein to join the multiparty talks on Northern Ireland's future. Recalcitrant elements on both the Republican and Loyalist sides, however, showed their determination to continue the armed struggle over whether Northern Ireland should remain part of the United Kingdom or be united with the Republic of Ireland. At the end of the year, Republican prisoners in Belfast's Maze prison shot a rival prisoner, Loyalist terrorist leader Billy "King Rat" Wright. Within a day Wright's followers shot and killed a former IRA member in County Tyrone, and several other killings of Catholics followed.

Greek Government efforts during 1997 to crack down on indigenous terrorism continue to yield few successes. There has been no known progress in bringing members of the 17 November terrorist organization to justice. A major suspect in the 1986 bombing of the La Belle discotheque was extradited to Germany, however. An Italian Red Brigades terrorist who had been living freely in Greece for 12 years was arrested and entered into extradition proceedings. (A Greek court released him in early 1998).

In eastern Turkey, authorities and security forces remain locked in a war of attrition with the terrorist group PKK. There are also signs that the DHKP/C (formerly the Dev Sol terrorist organization) may be resurfacing and targeting Turkish Government figures and US military and commercial interests.

There were numerous attacks targeted against the international presence in Bosnia and Herzegovina, most consisting of small-scale bombings. Terrorist acts and threats have been triggered by dissatisfaction over the international community's handling of voter registration procedures, the return of refugees, and the apprehension of suspected war criminals.



## Overview of State-Sponsored Terrorism

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### Overview of State-Sponsored Terrorism

The Secretary of State has designated seven governments as state sponsors of terrorism: Cuba, Iran, Iraq, Libya, North Korea, Sudan, and Syria. These governments support international terrorism either by engaging in terrorist activity themselves or by providing arms, training, safehaven, diplomatic facilities, financial backing, logistic and/or other support to terrorists.

The US policy of bringing maximum pressure to bear on state sponsors of terrorism and encouraging other countries to do likewise has paid significant dividends. There has been a marked decline in state-sponsored terrorism in recent years. A broad range of bilateral and multilateral sanctions serves to discourage state sponsors of terrorism from continuing their support for international acts of terrorism, but continued pressure is essential.

Although there is no evidence to indicate that Cuba sponsored any international terrorist activity in 1997, it continues to provide sanctuary to terrorists from several different terrorist organizations. Cuba also maintains strong links to other state sponsors of terrorism.

Notwithstanding some conciliatory statements in the months after President Khatami's inauguration in August 1997, Iran remains the most active state sponsor of terrorism. There is no evidence that Iranian policy has changed, and Iran continues both to provide significant support to terrorist organizations and to assassinate dissidents abroad.

Iraq provides safehaven to a number of terrorist and rejectionist groups. It continues to rebuild its intelligence network, which had been used to support international terrorist activity, but there is no available evidence to prove active Iraqi participation in terrorist activity in 1997.

Libya also continues to provide safehaven to accused terrorists, refusing to hand over the two suspects in the Pan Am 103 attack and the six suspects named by French authorities in the attack on UTA 772. Libya refuses to comply fully with UN Security Council sanctions imposed because of Libyan involvement in both bombings. In addition, Libya continues to provide support to a number of Middle Eastern terrorist groups, including the ANO, PIJ, and the PFLP-GC. Credible evidence indicates Libya abducted prominent Libyan dissident and human rights activist Mansur Kikhia (a legal permanent resident of the United States) in 1993 and had him executed in early 1994.

Although North Korea has not been conclusively linked to any acts of international terrorism since the 1987 midair bombing of KAL 858, it continues to provide sanctuary for five hijackers of a Japanese airliner.

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### Usama Bin Ladin

Usama bin Muhammad bin Awad Bin Ladin is one of the most significant sponsors of Sunni Islamic terrorist groups. The youngest son of Saudi construction magnate Muhammad Bin Ladin, Usama joined the Afghan resistance almost immediately after the Soviet invasion in December 1979. He played a significant role in financing, recruiting, transporting, and training Arab nationals



who volunteered to fight in Afghanistan. During the war, Bin Ladin founded al-Qaida--the Base--to serve as an operational hub, predominantly for like-minded Sunni Islamic extremists. The Saudi Government revoked his citizenship in 1994 and his family officially disowned him. He had moved to Sudan in 1991, but international pressure on that government forced him to move to Afghanistan in 1996.

In August 1996, Bin Ladin issued a statement outlining his organization's goals: drive US forces from the Arabian Peninsula, overthrow the Government of Saudi Arabia, "liberate" Muslim holy sites in "Palestine," and support Islamic revolutionary groups around the world. To these ends, his organization has sent trainers throughout Afghanistan as well as to Tajikistan, Bosnia, Chechnya, Somalia, Sudan, and Yemen and has trained fighters from numerous other countries including the Philippines, Egypt, Libya, and Eritrea. Bin Ladin also has close associations with the leaders of several Islamic terrorist groups and probably has aided in creating new groups since the mid-1980s. He has trained their troops, provided safehaven and financial support, and probably helps them with other organizational matters.

Since August 1996, Bin Ladin has been very vocal in expressing his approval of and intent to use terrorism. He claimed responsibility for trying to bomb US soldiers in Yemen in late 1992 and for attacks on them in Somalia in 1993, and reports suggest his organization aided the Egyptian al-Gama'at al-Islamiyya in its assassination attempt on Egyptian President Mubarak in Ethiopia in 1995. In November 1996 he called the 1995 and 1996 bombings against US military personnel in Saudi Arabia "praiseworthy acts of terrorism" but denied having any personal participation in those bombings. At the same time, he called for further attacks against US military personnel, saying: "If someone can kill an American soldier, it is better than wasting time on other matters."

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Sudan has taken some positive steps on terrorism, but it still has not complied with UN Security Council resolutions that demand an end to Sudanese support for terrorism and Sudanese rendition of the three suspects involved with the 1995 assassination attempt against Egyptian President Mubarak in Addis Ababa. Moreover, Sudan continues to allow its territory to be used for safehaven, training, and transit by terrorists.

There is no evidence of direct Syrian involvement in acts of international terrorism since 1986, but Syria continues to provide sanctuary and support for both a number of terrorist groups that seek to disrupt the Middle East Peace Process as well as the PKK.

#### Cuba

Cuba no longer actively supports armed struggle in Latin America and other parts of the world. In the past, the Castro regime provided significant levels of funding, military training, arms, and guidance to various revolutionary groups across the globe. However, with the collapse of its prime sponsor--the Soviet Union--in 1989, Cuba suffered a severe economic decline. Without ready cash, Havana was forced to scale back severely its already waning support to international terrorists. To make up for this economic shortfall, the Castro government's focus in recent years has been on generating revenue through tourism. Cuba's attempts to encourage foreign investment in the hospitality industry has forced the nation to seek upgraded diplomatic and trade relations with other nations.

Although Cuba is not known to have sponsored any international terrorist incidents in 1997, it continued to give safehaven to several terrorists during the year. A number of ETA terrorists who gained sanctuary in Cuba some years ago continue to live on the island. In addition, members of a

few Latin American-based international terrorist organizations and US fugitives also reside in Cuba.

Cuba also maintains close ties to other state sponsors of terrorism and remains in contact with leftist insurgent groups in Latin America. For instance, Colombia's two main terrorist groups, the FARC and the ELN, reportedly maintain representatives in Havana.

Cuba suffered from a string of small bombings targeting the island's tourism industry in 1997. At least six bombs detonated at Havana hotels and restaurants in April, July, August, and September. An Italian tourist was killed in one blast in early September, the only fatality of the bombing campaign. On 10 September, Cuban security forces announced they had arrested a Salvadoran citizen who confessed to planting the bombs. Havana charged that US-based groups were responsible for directing the bombing campaign from the United States, but it has repeatedly ignored US requests for evidence to support these charges.

## Iran

Iran remained the most active state sponsor of terrorism in 1997. Tehran continued to be involved in the planning and execution of terrorist acts by its own agents and by surrogates such as the Lebanese Hizballah and continued to fund and train known terrorist groups throughout 1997. Although the August 1997 accession of President Khatami has resulted in more conciliatory Iranian public statements, such as public condemnations of terrorist attacks by Algerian and Egyptian groups, Iranian support for terrorism remains in place.

Tehran conducted at least 13 assassinations in 1997, the majority of which were carried out in northern Iraq. Iran's targets normally include, but are not limited to, members of the regime's main opposition groups, including the Kurdish Democratic Party of Iran (KDPI) and the Mujahedin-e Khalq (MEK). Elsewhere in Iraq, in January 1997 Iranian agents tried to attack the Baghdad headquarters of the MEK using a "supermortar" of a design similar to that discovered aboard the Iranian ship "Kolahdooz" by Belgian customs authorities in early 1996. The attack was unsuccessful, resulting in the death of one person and some damage to an Iraqi hospital building.

April 1997 witnessed the conclusion of the trial in Germany of an Iranian and four Lebanese for the 1992 killing of Iranian Kurdish dissidents, one of whom was then Secretary General of the KDPI, in Berlin's Mykonos restaurant. A German judge found the Iranian and three of the Lebanese guilty of the murders. Two defendants, Kazem Darabi and Abbas Rhayel, were sentenced to life in prison. Two others, Yousef Amin and Muhammad Atris, received sentences of 11 years and five years and three months, respectively. The fifth defendant, Aatollah Ayad, was acquitted. The court stated that the Government of Iran had followed a deliberate policy of liquidating the regime's opponents who lived outside Iran, including the opposition KDPI. The judge further stated that the Mykonos murders had been approved at the most senior levels of the Iranian Government by an extra-legal committee whose members included the Minister of Intelligence and Security, the Foreign Minister, the President, and the Supreme Leader. As a result of elections in May, however, the positions of Minister of Intelligence and Security, Foreign Minister, and President are now held by individuals other than those who were involved in the "Mykonos" murders. In March 1996 a German court had issued an arrest warrant in this case for Ali Fallahian, the former Iranian Minister of Intelligence and Security.

In September 1997, Iran's new leadership affirmed the *fatwa* on Salman Rushdie, which has been in effect since 1989, stating once again that revocation is impossible since the author of the *fatwa* is deceased. There is no indication that Tehran is pressuring the Fifteen Khordad Foundation to withdraw the \$2.5 million reward it is offering for executing the *fatwa* on Rushdie.

Iran continued to provide support--in the form of training, money, and/or weapons--to a variety of

terrorist groups, such as Lebanese Hizballah, HAMAS, and the PIJ. The Iranian Government continues to oppose recognition of Israel and to encourage violent rejection of the Middle East Peace Process. In the fall of 1997, Tehran hosted numerous representatives of terrorist groups--including HAMAS, Lebanese Hizballah, the PIJ, and the Egyptian al-Gama'at al-Islamiya--at a conference of "Liberation Movements." Participants reportedly discussed the jihad, establishing greater coordination between certain groups, and an increase in support for some groups. In October, the Algerian Government accused Tehran of training and equipping Algerian terrorists.

Iran still provides safehaven to elements of the PKK, a Turkish separatist group that has conducted numerous terrorist attacks in Turkey and on Turkish targets in Europe. Following a late 1997 Turkish incursion into northern Iran in pursuit of PKK cadres, Tehran protested the violation of its territory but in 1997 made no effort to remove the PKK from Iranian territory.

In November, Iran's Minister of Foreign Affairs, Dr. Kamal Kharrazi, publicly condemned the terrorist attack by the Egyptian al-Gama'at al-Islamiyya on tourists at Luxor, Egypt. Similarly, in early January 1998 the Foreign Ministry's official spokesman, Mahmud Mohammadi, also condemned the vicious attacks on civilians during the Muslim month of Ramadan (late December 1997 to early January 1998) "no matter who was responsible."

(President Khatemi, in a 7 January 1998 CNN interview, agreed that terrorist attacks against non-combatants, including Israeli women and children, should be condemned.)

### **Iraq**

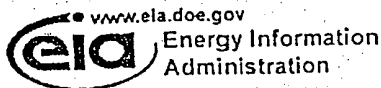
During 1997, Baghdad continued to rebuild its intelligence network, which had been heavily damaged during the Gulf war and which it had previously used to support international terrorism. Press reports citing oppositionist and refugee sources stated that the regime has infiltrated the UN refugee camps and Iraqi communities in Europe and the Middle East. Iraqi oppositionists have claimed publicly that the regime intends to silence them and accused Baghdad of planning to assassinate Iraqi exiles. However, there is no available evidence to indicate that Iraq's agents participated directly in terrorist attacks during 1997. The last known such attack was against former President Bush in 1993.

In October, several gunmen attacked the World Health Organization headquarters in Baghdad with handgrenades, causing property damage but no casualties. The Iraqi Government blamed the attack on Iranian agents. Iran denied any involvement. A rocket attack 2 January 1998 on the headquarters of the United Nations (UNSCOM) inspectors in Baghdad did not cause damage because the rocket did not explode. No group claimed responsibility for the attacks.

Iraq continues to provide safehaven to a variety of Palestinian terrorist groups, including the ANO, the Arab Liberation Front (ALF), and the former head of the now defunct 15 May Organization, Abu Ibrahim, who masterminded several bombings of US aircraft. Iraq also provides bases, weapons, and protection to the MEK, a terrorist group that opposes the current Iranian regime.

### **Libya**

The end of 1997 marked the sixth year of the Libyan regime's refusal to comply in full with the demands of UN Security Council Resolutions (UNSCR) 731, 748, and 883 adopted in response to Tripoli's involvement in the bombings of Pan Am Flight 103 and UTA Flight 772. The bombings claimed a total of 441 lives. UNSCR 731 was adopted following the indictments in November 1991 of two Libyan intelligence agents for the bombing of Pan Am Flight 103 in 1988. The resolution ordered Libya to turn over the two Libyan bombing suspects for trial in the United States or the United Kingdom, pay compensation, cooperate in the ongoing investigations into the Pan



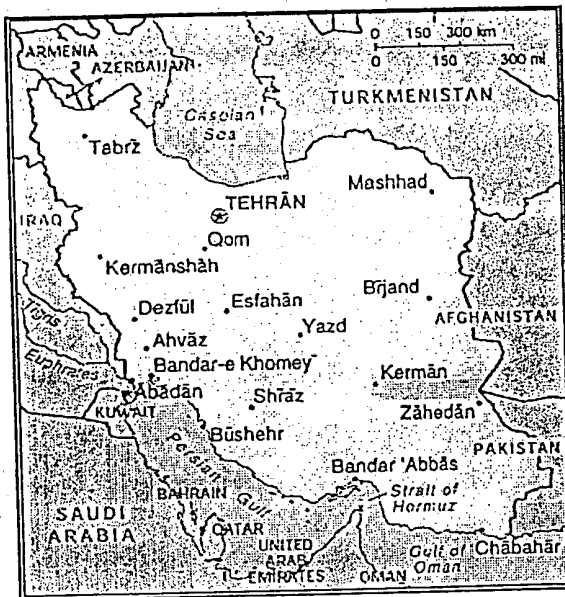
Environment Data Mailing List Links

February 2000

## Iran

*Iran is OPEC's second largest oil producer and holds 9% of the world's oil reserves and 15% of its gas reserves. Additionally, Iran is a focal point for regional security issues.*

*Information contained in this report is the best available as of February 2000 and is subject to change.*



### GENERAL BACKGROUND

Iran's economy, which relies heavily on oil export revenues, was hit hard by record-low oil prices during 1998 and early 1999, but with the rebound in oil prices over the past year, has begun to recover somewhat. For 1999, Iran's gross domestic product (GDP) grew by 2.5%. For 2000, Iran's real GDP is expected to grow at a more rapid, 4.2% rate. Besides persistent unemployment and inflation, other problems faced by Iran's economy include: a rapidly growing, young population with limited job prospects; heavy dependence on oil revenues (about half the state's budget and 80% of the country's hard currency earnings); \$16 billion in external debt (including a high proportion of short-term debt); expensive state subsidies on many basic goods; a large, inefficient public sector and state monopolies (bonyads, which control at least a quarter of the economy and constitutionally are answerable only to supreme leader Ayatollah Ali Khamenei); and international isolation and sanctions.

In September 1999, President Khatami announced an ambitious program to privatize several major industries, including communications, post, rail, and tobacco, as part of the "total restructuring" of the Iranian economy called for in the country's latest five-year economic plan (which begins in March 2000). Among other measures, a partial float of the rial, is being considered, as is the privatization of some 2,400 state-owned firms. Also, Iran is attempting to diversify by investing some of its oil revenues in other areas. Iran also is hoping to attract billions of dollars worth of foreign investment to the country by creating a more favorable investment climate. This would involve a variety of measures, including possible constitutional amendments, reduced "red tape," reduced restrictions and duties on imports, creation of free-trade zones, and increased safety of foreign investments. In October 1999, Iran's government reportedly decided to open up its mining and metals sectors to foreign investors.

On February 18, 2000, Iran held its sixth parliamentary elections since the 1979 Islamic revolution. Results of the elections indicated an overwhelming (over 70% of the vote) victory for the reformist coalition -- called the Second of Kordad Movement, after the date on the Iranian calendar of President Khatami's election (in 1997). In the wake of the election, U.S. President Clinton called for a "constructive partnership with Iran." Shortly after the reformist coalition victory, a leading conservative, Mohammadreza Bahonar, acknowledged that although "we will not change our

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principles and positions...it is natural that we should reconsider our policies and methods." The effect of Iran's recent elections on the country's energy sector at this point remains uncertain.

### Sanctions

The Iran-Libya Sanctions Act (ILSA) of 1996 imposes mandatory and discretionary sanctions on non-U.S. companies which invest more than \$20 million annually (lowered in August 1997 from \$40 million) in the Iranian oil and gas sectors. Also, in early 1995, President Clinton signed two executive orders which prohibited U.S. companies and their foreign subsidiaries from conducting business with Iran. The orders also banned any "contract for the financing of the development of petroleum resources located in Iran." As a result, U.S.-based Conoco was obligated to abrogate a \$550-million contract to develop Iran's offshore Sirri A and E oil and gas fields. After Conoco pulled out of the Sirri project, France's Total and Malaysia's Petronas were awarded the contract. On August 19, 1997, President Clinton signed Executive Order 13059 reaffirming that virtually all trade and investment activities by U.S. citizens in Iran are prohibited.

### Caspian Energy

Iran sees itself as a natural (geographically and economically) transit route for oil and gas exports from the landlocked Central Asian countries to world markets. This vision is complicated, however, by political considerations, particularly the U.S. policy opposing pipelines through Iran (the United States has made the construction of an oil pipeline from Baku, Azerbaijan to Ceyhan, Turkey the centerpiece of its Caspian policy). In November 1999, two multi-billion-dollar agreements were signed -- by Turkey, Azerbaijan, Georgia, and Turkmenistan -- regarding development of the Baku-Ceyhan oil pipeline.

### Crude Swaps

In order to get around restrictions in dealing with Iran, several firms have proposed oil "swaps" involving the delivery of Caspian oil to refineries in northern Iran, while the same amount of Iranian oil is exported through Persian Gulf terminals. According to Iranian Oil Minister Bijan Namdar-Zangeneh, Iran is planning to retool its oil infrastructure to accommodate such swaps, including construction of a \$400-million, 240-mile pipeline from the Caspian area via Iran's Caspian port of Neka to refineries in northern Iran and to Tehran. NIOC already has reached agreement with a Chinese consortium on the technical aspects of the project, which is expected to transport 175,000 bbl/d of Caspian crude within two years, and ultimately up to 370,000 bbl/d. Also, European oil trading company Vitol has expressed interest in financing the project. In January 2000, U.S. Ambassador to Azerbaijan, Stanley Escudero, said that transit of oil from Azerbaijan would be a "mistake."

### OIL

Iran holds 90 billion barrels of proven oil reserves, or roughly 9% of the world's total. The vast majority of Iran's crude oil reserves are located in giant onshore fields in the Khuzestan region near the Iraqi border and Persian Gulf terminus. More than half of Iran's 40 producing fields contain over one billion barrels of oil. The onshore Ahwaz, Marun, Gachsaran, Agha Jari, and Bibi Hakimeh fields alone account for about two-thirds of Iran's oil production. Most of Iran's crude oil is low in sulfur, with gravities in the 30°-39° API range.

In October 1999, Iran announced that it had found its biggest oil discovery in 30 years, a giant onshore field called Azadegan located in the southwestern province of Khuzestan. According to Iran's Oil Minister Zanganeh, the Azadegan field could contain 26 billion barrels of oil, with potential production of 400,000 bbl/d. Also according to Zanganeh, development of Azadegan could begin by the end of March 2001. The field reportedly is to be developed using the "buy-back" model (see below).

Since 1995, the National Iranian Oil Company (NIOC) has made several sizable oil discoveries. These include the 2.5-billion-barrel Darkhovin field, located offshore Abadan and containing low sulfur, 39° API crude oil. NIOC aims for initial production from Darkhovin of 30,000 barrels per day (bbl/d), with a second phase peak of 60,000 bbl/d. Production goals are still uncertain, though, and further

appraisal is required.

### Production

Iran is OPEC's second-largest oil producer, with average 1999 crude oil production of 3.6 million bbl/d. Iran's current sustainable production capacity is estimated as high as 4 million bbl/d, but this figure is controversial since Iran may have maintained production levels at some older fields only by using methods which have permanently damaged the fields. Iran produced 6 million bbl/d in 1974, but has not produced more than 3.7 million bbl/d since the 1978/79 Iranian revolution.

In June 1998, Iran agreed to reduce its production by 305,000 bbl/d, and in March 1999, Iran agreed to a further cut of 264,000 bbl/d as part of an OPEC quota agreement. As of April 1, 1999, Iran's new production quota was set at 3.359 million bbl/d. With production running around 3.5 million bbl/d as of early 2000, and with consumption of 1.2 million bbl/d, Iran currently is a net exporter of around 2.3 million bbl/d. Around half of Iran's oil exports go to Asian markets, with the remainder going to Europe and Africa.

### Foreign Investment

The Iranian constitution prohibits the granting of petroleum rights on a concessionary basis. However, the 1987 Petroleum Law permits the establishment of contracts between the Ministry of Petroleum, state companies and "local and foreign natural persons and legal entities." In August 1998 the ministry announced invitations to bid on 43 petroleum projects worth some \$8 billion in what has come to be known as the "buyback" investment methodology. Buyback contracts are essentially risk-service contracts according to which the contractor funds all investments. The contractor recovers its investment from a commercial field and receives remuneration from NIOC. The remuneration is based on an agreed contractor rate of return (15-17%) and is paid in the form of NIOC's allocation of a share of production equal in value to the amount due. This system has drawbacks for both sides: by offering a fixed rate of return, NIOC bears all the risk of low oil prices. If prices drop, NIOC has to sell more oil or gas to meet the compensation figure. At the same time, companies have no guarantee that they will be permitted to develop their discoveries, let alone operate them. U.S. law permits American companies to buy the bid packages (\$10,000 each), but not to submit proposals. Several U.S. firms are reportedly interested in the buyback offers, including Chevron, Arco, Kerr-McGee, Unocal, Conoco and Mobil. Arco and Mobil have officially notified Iran that they are interested in the projects and have applied to purchase oil field data.

The first major project under the buyback investment scheme became operational in October 1998, when the offshore Sirri A oil field (operated by Total and Malaysia's Petronas) began production at 7,000 bbl/d (Sirri A currently is producing around 20,000 bbl/d). The neighboring Sirri E field began production in February 1999, with production expected to reach 100,000 bbl/d. In March 1998, Canada's Bow Valley Energy and UK's Premier Oil signed a \$270-million deal to develop the offshore Balal field. The field, which contains some 80 million barrels of reserves, will produce up to 40,000 bbl/d, possibly beginning in late 2001. Bow Valley joined with Premier after Indonesia's Bakrie Minarak Petroleum pulled out of the project due to financial problems stemming from the Asian economic crisis. In December 1999, the Indian Oil Corporation and the Oil and Natural Gas Corporation reportedly agreed to acquire 35% equity in Balal.

In March 1999, France's Elf Aquitaine and Italy's ENI/Agip signed a \$540-million (in capital expenditures) deal for a secondary recovery program on the offshore Doroud oil and gas field near Kharg Island. The program is intended to boost production from current levels of around 150,000 bbl/d to as high as 220,000 bbl/d. Production is scheduled to begin in 2000 and peak in 2003, continuing for another 25 years.

### Onshore Developments

NIOC's onshore field development work is concentrated mainly on sustaining output levels from large, aging fields. Consequently, enhanced oil recovery (EOR) programs, including gas injection, are underway at a number of fields, including Marun, Karanj, and the presently inactive Parsi fields. EOR programs will require sizeable amounts of natural gas, infrastructure development, and financing.



Although NIOC has run into difficulties in implementing EOR programs at some of its fields mentioned above (i.e., Agha Jari, Binak, Kupal, and Ramshahr) fields, it has been successful in many other cases. One example is NIOC's development work at Gachsaran, which contains in-place reserves of 53 billion barrels and a large-scale gas injection capacity which should help increase production.

### Offshore Developments

As of 1998, Iran was producing about 500,000 bbl/d of crude oil from eight operational offshore fields. The Doroud 1&2, Salman, Abuzar, Forozan, and Sirri fields comprised the bulk of Iran's offshore output, all of which is exported. Iran plans extensive development of existing offshore fields and hopes to raise its offshore production capacity to 1 million bbl/d in coming years. It is estimated that development of new offshore Persian Gulf and Caspian Sea oil fields will require investment of \$8-\$10 billion.

The 105-million barrel Balal field, discovered in the 1970s by an ARCO/Murphy consortium, was never developed even though an oil pipeline connecting the field to the Lavan Island export terminal was laid. As mentioned above, Canada's Bow Valley Energy Ltd. is now conducting detailed engineering work, including a 3-D seismic survey, on the Balal field. Balal likely will require extensive water injection and other secondary recovery methods, especially in later years.

On November 14, 1999, Shell announced that it had been chosen for an \$800-million project to develop the Soroush and Nowruz offshore oil fields. These fields are located about 50 miles west of Kharg Island and contains estimated recoverable reserves of 400 million barrels of mainly heavy oil. Soroush was one of the original 11 projects put out for tender by NIOC in 1995, and the project calls for Shell to raise output at Soroush to 100,000-150,000 bbl/d (from 60,000 bbl/d currently), and at Nowruz to 90,000 bbl/d. The Shell deal is potentially problematic in that it would appear to be in violation of U.S. sanctions under ILSA.

NIOC also would like to develop five oil and gas fields in the Hormuz region (Henjam A (HA), HB, HC, HD, and HE), the A field near Lavan Island, the Esfandir field near Kharg Island, and two structures near the South Pars gas field. According to NIOC, the five Henjam fields hold an estimated 400 million barrels of oil and have a production potential of 80,000 bbl/d.

### Refining

As of January 2000, Iran had nine operational refineries with a combined capacity of 1.47 million bbl/d. In order to meet burgeoning domestic demand for middle and light distillates, Iran has imported refined products since 1982, and is attempting to boost its refining capacity to 2 million bbl/d. Two planned grassroots refineries include a 225,000-bbl/d plant at Shah Bahar and a 120,000-bbl/d unit on Qeshm Island. The \$3-billion Shah Bahar refinery project was approved by the government in late 1994 and would be built by private investors.

### NATURAL GAS

Iran contains an estimated 812 trillion cubic feet (Tcf) in proven natural gas reserves -- the world's second largest and surpassed only by those found in Russia. The bulk of Iranian gas reserves are located in non-associated fields, and has not been developed, meaning that Iran has huge potential for gas development. Besides domestic consumption, which is growing rapidly, Iran also has the potential to be a large natural gas exporter. In 1998, Iran produced about 1.9 Tcf of natural gas. Currently, natural gas accounts for around 40% of Iran's total energy consumption.

Iran's largest non-associated natural gas field is South Pars, geologically an extension of Qatar's 241-Tcf North Field. South Pars was first identified in 1988 and originally appraised at 128 Tcf in the early 1990s. However, NIOC-sponsored studies conducted in mid-1996 indicate that South Pars contains an estimated 240 Tcf of gas, of which a large fraction will be recoverable, and at least 3 billion barrels of condensate. Iran's other sizable non-associated gas reserves include the offshore 47-Tcf North Pars gas field (a separate structure from South Pars), the onshore Nar-Kangan fields, the

13-Tcf Aghar and Dalan fields in Fars province, and the Sarkhoun and Mand fields.

The dual Aghar-Dalan field development has been one of National Iranian Gas Company's (NIGC) recent successful gas utilization projects. Since coming online in mid-1995, the Aghar and Dalan fields have produced approximately 600 million cubic feet per day (Mmcf/d) and 800 Mmcf/d, respectively. Gas from both fields is processed at a \$300-million gas processing facility at the Dalan field, which is also the location of a 40-MW, gas-fired power plant. Most of the treated gas from the Dalan processing plant is carried through a 212-mile pipeline for re-injection in the Marun field and other oil fields in Khuzestan province.

#### **New Field Development Projects**

On September 29, 1997, Total signed a \$2-billion deal (along with Russia's Gazprom and Malaysia's Petronas) to explore South Pars and to help develop the field during Phase 2 and 3 of its development. NIOC estimates that South Pars has a gas production potential of up to 8 billion cubic feet per day (Bcf/d) from four individual reservoirs, possibly beginning in 2001. Phase I, currently scheduled for completion by the end of 2000, involves production of 900 million cubic feet per day (Mmcf/d) of natural gas and 40,000 bbl/d of condensate. This first phase is being carried out by the Petroleum Development and Engineering Company (PEDEC), an affiliate of NIOC, while Total's consortium is responsible for Phases 2 and 3. In August 1999, Total signed a \$110-million contract with Hyundai Heavy Industries for construction of twin undersea pipelines from South Pars to onshore facilities at Assaluyeh. As of late 1999, the future of South Pars Phases 4 and 5 remained uncertain, with Shell and Gazprom both claiming to be in the running.

In addition to South Pars, Iran aims to develop the 6.4-Tcf, non-associated Khuff (Dalan) reservoir of the Salman oil field. Salman straddles Iran's maritime border with Abu Dhabi, where it is known as the Abu Koosh field. NIOC is seeking to develop the Khuff reservoir, which could lead to the production of 500 Mmcf/d of non-associated gas, along with the 120,000 bbl/d of crude oil that is now being produced from a shallower reservoir. Salman gas could either be exported to Dubai's Jebel Ali or to domestic locations at Qeshm Island and Badar Mogham. The project cost is estimated at slightly under \$600 million for a two-platform development.

The 47-Tcf North Pars development will be integral to Iran's long-term gas utilization plans. In early 1994, Shell completed a feasibility study on the field. Development plans call for 3.6 Bcf/d of gas production, of which 1.2 Bcf/d would be re-injected into the onshore Gachsaran, Bibi Hakimeh, and Binak oil fields. The other 2.4 Bcf/d would be sent to the more mature Agha Jari oil field. Negotiations on the field stalled in 1995, but Shell reportedly renewed its interest in 1998.

#### **Natural Gas Exports**

Although domestic gas consumption is growing rapidly, including use as a motor fuel, Iran continues to promote export markets for its natural gas. Possibilities include pipelines to Turkey, Armenia, Europe, Pakistan, and India, plus the possibility of an LNG facility for producing exports to Asia.

In 1996, Iran and Turkey signed a \$20-billion agreement that calls for Iran to supply Turkey with natural gas over a period of 22 years. Exports of Iranian gas to Turkey were slated to start in 1999 at an initial rate of 300 Mmcf/d and rise to a level of 1,000 Mmcf/d in 2005. In November 1998, Turkey began construction of a 623-mile pipeline that could transport gas westward from Iran. In January 2000, Iran said that it accepted Turkey's request to delay the purchase of Iranian natural gas until September 2001. Turkey said that it had been unable to complete its portion of the pipeline due to economic problems.

#### **ELECTRIC POWER**

Iran has installed power generation capacity of about 27 gigawatts (GW), with around 64% of thermal plants natural gas-fired. With power demand growing rapidly, Iran is adding significant generation capacity -- both thermal and hydroelectric. The largest hydro project is the 2,000-MW Godar-e Landar dam. In March 1999, the second phase of construction began on the Masjed-Soleyman hydroelectric

power plant in Khuzestan province. The project will increase generation capacity in Khuzestan by 2 GW.

A number of new power plants have come online recently in recent years in Iran, including the Mitsubishi-built, 2,000-MW Shahid Rai thermal power station in Qazvin, a 1,290-MW combined-cycle plant in Rasht, and a doubling of the Tabriz power plant's capacity to 1,500 MW. Iran continues to add power generating capacity at a rapid pace. According to Minister of Energy Habibollah Bitaraf, Iran's annual power consumption is growing and Iran's power generation sector will require billions of dollars in foreign investment over the next few years. Iran has received offers for investment in the form of loans and build-operate-and-transfer-contracts (BOT). BOT contracts allow the investing company to build and operate the generating facility for a period of 15-20 years, after which time the plant is turned over to the Energy Ministry. Negotiations have taken place with international energy firms on expansion plans for power plants at Bandar Abbas, Shaid Rajai, Alborz, Ramin, and Kerman.

In 1998, Iran's deputy energy minister said that Iran would welcome the participation of European and U.S. private investors in the planned privatization of the country's power generation industry. Breaking up the state power generation monopoly (Tavanir) into competing private companies and reducing large state subsidies are two important proposed measures aimed at increasing electric generation and transmission efficiency, reducing an estimated \$4 billion in wasted electricity and attracting foreign investment.

### NUCLEAR

On October 3, 1997, the head of Iran's Atomic Energy Agency (Gholamreza Aghazadeh, the former Oil Minister) announced that Iran would attempt to meet 20% of the country's electricity demand through nuclear power. Aghazadeh said that Iran had decided to build a second 1,000-MW unit at the Bushehr nuclear power complex as soon as work is completed on the current unit being built by the Russians. Aghazadeh further said that Iran was discussing further nuclear power plant deals with Russia and China.

Currently, Iran has five small nuclear reactors, one in Tehran and four in Isfahan. Iran claims that its nuclear power is for peaceful purposes and that it will help free up oil and gas resources for export, thus generating additional hard-currency revenues. In February 1998, the U.S. State Department reaffirmed U.S. opposition to Iran's nuclear program. The United States has argued that Iran has sufficient oil and gas reserves for power generation, and that nuclear reactors are expensive, unnecessary, and could be used for military purposes. Iran is a signatory to the Nuclear Non-Proliferation Treaty.

Work on Bushehr had begun in 1974, but was halted (80% complete) following the 1979 Islamic Revolution. In January 1995, progress on Bushehr resumed when Russia signed a \$780-million contract to complete the facility. The Russian deal calls for completion of the two 1,300-MW pressurized-light water units as well as the supply of two modern VVER-440 units. The United States strongly opposes the project and has in the past provided Russia with information pointing to the existence of an Iranian nuclear weapons program. Despite this, the Russians have proceeded, although slowly, with work on Bushehr. A final completion date currently remains uncertain.

### ENVIRONMENT

In the context of its oil-based economy, environmental issues in Iran only recently have become important. Ongoing air pollution in urban areas, which reached a crisis level in Tehran in December 1999, have highlighted the need to improve Iran's environmental record. The rush to develop oil and gas resources in the Caspian Sea makes oil pollution in the Caspian a real environmental threat.

Huge increases in energy consumption over the past 20 years have contributed greatly to pollution levels as Iran's carbon emissions have nearly tripled over the same time span. Large numbers of old, inefficient cars on the road lacking catalytic converters account for much of the country's carbon emissions. Together with the widespread use of low-quality, leaded gasoline, this combination has led

to noxious, black smoke spewing from cars creating a cloud of smog above many cities, especially Tehran.

In addition, Iran's abundance of fossil fuel resources has tended to discourage the country's incentive to shift to cleaner alternative energy sources for its energy needs. As Iran continues to struggle with air pollution in the 21st century, however, the country likely will need to shift its energy mix in order to avert an environmental crisis.

*Sources for this report include: Agence France Presse; AP Worldstream; BBC Worldwide Monitoring; Chemical News and Intelligence; CIA World Factbook 1999; Deutsche Presse-Agentur; Dow Jones; Financial Times; Hart's Middle East Oil and Gas; International Herald Tribune; Iran Brief; Middle East Business Intelligence; Middle East Economic Digest; Mining Journal; New York Times; Oil and Gas Journal; Petroleum Economist; Petroleum Intelligence Weekly; U.S. Energy Information Administration; International Monetary Fund; World Bank*

For a longer, more detailed version of this report please press here.

### COUNTRY OVERVIEW

**President:** Mohammed Khatami (since August 1997)

**Supreme/Spiritual Leader:** Ayatollah Ali Khamenei

**Islamic Republic Proclaimed:** April 1, 1979

**Population (1999E):** 66.5 million

**Location/Size:** Middle East - between the Persian Gulf and the Caspian Sea/636,296 square miles

**Major Cities:** Tehran (capital), Meshed, Isfahan, Tabriz, Shiraz, Ahwaz, Kermanshah, Qom, Ardebil, Qazvin

**Languages:** Persian and Persian dialects (58%), Turkic and Turkic dialects (26%), Kurdish (9%), Luri (2%), Baluch (1%), Arabic (1%), Turkish (1%)

**Ethnic Groups:** Persian (51%), Azerbaijani (24%), Gilaki and Mazandarani (8%), Kurd (7%), Arab (3%), Lur (2%), Baluch (2%), Turkmen (2%), other (1%)

**Religion:** Shi'a Muslim (89%), Sunni Muslim (10%), Zoroastrian, Jewish, Christian, and Baha'i (1%)

**Defense (8/98):** Army (350,000), Revolutionary Guard (120,000), Navy (20,600), Air Force (40,000-45,000), army reserves (350,000)

### ECONOMIC OVERVIEW

**Minister of Economy and Finance:** Hossain Namazi

**Currency:** Rial (R)

**Exchange Rates (2/22/00):** R 1,755 per \$U.S. for official budget transactions and essential goods imports and exports, as well as external debt service

**Gross Domestic Product (GDP) (1999E):** \$200.5 billion

**Real GDP Growth Rate (1999E):** 2.5% (2000E): 4.2%

**Inflation Rate (1999E):** 16.2% (2000E): 13.4%

**Current Account Balance (1999E):** -\$1.13 billion (2000E): \$0.26 billion

**Major Trading Partners:** Germany, Italy, Japan, France, Turkey, United Kingdom, Netherlands, Spain

**Merchandise Exports (1999E):** \$14.8 billion

**Merchandise Imports (1999E):** \$14.0 billion

**Major Export Products:** Petroleum and related products, carpets, pistachios

**Major Import Products:** Machinery, military equipment, metals, foodstuffs, pharmaceuticals, refined oil products, technical services

**Oil Export Revenues (1999E):** \$13.9 billion (2000E): \$21.9 billion

**Oil Export Revenues/Total Export Revenues (1999E):** around 90%

**Total External Debt (1999E):** \$16.3 billion

### ENERGY OVERVIEW

**Minister of Energy:** Habibollah Bitaraf

**Minister of Petroleum:** Bijan Namdar-Zanganeh

**Proven Oil Reserves (1/1/00E):** 89.7 billion barrels  
**OPEC Crude Oil Production Quota:** 3.359 MMBD (as of April 1, 1999)  
**Sustainable Oil Production Capacity (1999E):** 3.7-4.0 MMBD  
**Oil Production (10/99E):** 3.50 MMBD  
**Oil Consumption (1999E):** 1.2 MMBD  
**Net Oil Exports (1999E):** 2.4 MMBD  
**Crude Oil Refining Capacity (1/1/00E):** 1.47 MMBD  
**Major Crude Oil Customers (1999):** Japan, South Korea, United Kingdom, China, Turkey, Thailand, India, Brazil, Taiwan  
**Natural Gas Reserves (1/1/00E):** 812 trillion cubic feet (Tcf)  
**Natural Gas Production (1998E):** 1.9 Tcf  
**Natural Gas Consumption (1998E):** 1.8 Tcf  
**Recoverable Coal Reserves (12/97E):** 213 million short tons (Mmst)  
**Coal Production (1998E):** 1.02 Mmst  
**Coal Consumption (1998E):** 1.66 Mmst  
**Net Coal Imports (1998E):** 0.44 Mmst  
**Electric Generation Capacity (1998E):** 26.8 gigawatts (91% thermal)  
**Electricity Production (1998E):** 95.3 billion kilowatthours

### ENVIRONMENTAL OVERVIEW

**Vice President for Environmental Protection:** Dr. Mrs. Masumeh Ebtekar

**Total Energy Consumption (1998E):** 4.5 quadrillion Btu\* (1.2% of world total energy consumption)

**Energy-Related Carbon Emissions (1998E):** 79.4 million metric tons of carbon (1.3% of world carbon emissions)

**Per Capita Energy Consumption (1998E):** 72.4 million Btu (vs U.S. value of 350.7 million Btu)

**Per Capita Carbon Emissions (1998E):** 1.3 metric tons of carbon (vs U.S. value of 5.5 metric tons of carbon)

**Energy Intensity (1998E):** 26,900 Btu/ \$1990 (vs U.S. value of 13,400 Btu/ \$1990)\*\*

**Carbon Intensity (1998E):** 0.47 metric tons of carbon/thousand \$1990 (vs U.S. value of 0.21 metric tons/thousand \$1990)\*\*

**Sectoral Share of Energy Consumption (1997E):** Industrial (42.9%), Residential (27.4%), Transportation (20.2%), Commercial (9.5%)

**Sectoral Share of Carbon Emissions (1997E):** Industrial (40.0%), Residential (27.7%), Transportation (22.8%), Commercial (9.5%)

**Fuel Share of Energy Consumption (1998E):** Oil (54.8%), Natural Gas (42.6%), Coal (0.9%)

**Fuel Share of Carbon Emissions (1998E):** Oil (57.4%), Natural Gas (41.3%), Coal (1.3%)

**Renewable Energy Consumption (1997E):** 106 trillion Btu\* (6% increase from 1996)

**Number of People per Motor Vehicle (1997):** 24.4 (vs U.S. value of 1.3)

**Status in Climate Change Negotiations:** Non-Annex I country under the United Nations Framework Convention on Climate Change (ratified July 18th, 1996). Not a signatory to the Kyoto Protocol.

**Major Environmental Issues:** Air pollution, especially in urban areas, from vehicle emissions, refinery operations, and industrial effluents; deforestation; overgrazing; desertification; oil pollution in the Persian Gulf; inadequate supplies of potable water

**Major International Environmental Agreements:** A party to Conventions on Biodiversity, Climate Change, Desertification, Endangered Species, Hazardous Wastes, Marine Dumping, Nuclear Test Ban, Ozone Layer Protection and Wetlands. Has signed, but not ratified, Environmental Modification, Law of the Sea and Marine Life Conservation

\* The total energy consumption statistic includes petroleum, dry natural gas, coal, net hydro, nuclear, geothermal, solar and wind electric power. The renewable energy consumption statistic is based on International Energy Agency (IEA) data and includes hydropower, solar, wind, tide, geothermal, solid biomass and animal products, biomass gas and liquids, industrial and municipal wastes. Sectoral shares of energy consumption and carbon emissions are also based on IEA data.

\*\*GDP based on EIA International Energy Annual 1998

**OIL AND GAS INDUSTRIES**

**Organizations:** National Iranian Oil Company (NIOC) - oil and gas exploration and production, refining and oil transportation; National Iranian Gas Company (NIGC) - manages gathering, treatment, processing, transmission, distribution, and exports of gas and gas liquids; National Petrochemical Company (NPC) - handles petrochemical production, distribution, and exports.

**Major Foreign Oil Company Involvement:** Gazprom, Petronas, Shell, Total

**Major Oil Fields:** Gachsaran, Marun, Ahwaz Bangestan, Agha Jari, Rag-e-Safid, Parsi, Bibi Hakimeh

**Major Refineries (capacity, bbl/d) (1/1/00E):** Abadan (400,000), Isfahan (265,000), Bandar Abbas (232,000), Tehran (225,000), Arak (150,000), Tabriz (112,000), Shiraz 40,000, Kermanshah (30,000), Lavan Island (20,000)

**Major Oil Terminals:** Ganaveh, Kharg Island, Lavan Island, Sirri Island, Cyrus, Ras Bahregan, Larak Island

**Gas Pipeline System:** IGAT-1 transports associated gas from Khuzestan area oilfields to consumption centers in the north; IGAT-2 transports non-associated gas from the Kangan and Nar fields on the Persian Gulf coast near Bandar Taheri; IGAT-3, which would run from South Pars to Tehran, is planned.

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For more information on Iran, please see these other sources on the EIA web site:

[EIA - Historical Energy Data on Iran](#)

[OPEC Fact Sheet](#)

Links to other U.S. government web sites:

[2000 CIA World Factbook - Iran](#)

[U.S. Treasury Department's Office of Foreign Assets Control](#)

[U.S. Iran-Libya Sanctions Act](#)

[U.S. State Department's Consular Information Sheet - Iran](#)

[Library of Congress Country Study on Iran](#)

[U.S Policy Towards Iran](#)

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[The Center for Middle Eastern Studies \(University of Texas at Austin\) - Iran](#)

[Iran Online](#)

[Interests Section of the Islamic Republic of Iran in Washington, DC \(in the Pakistani Embassy\)](#)

[Iran Business Resources](#)

[National Petrochemical Company of Iran](#)

[MENA Petroleum Bulletin](#)

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