PETROLISTAN
Oil and War

Today's standard of living in industrial nations, not to mention the number of people in our currently overpopulated world, are supported by the artificial carrying capacity created by fossil fuels. Without oil, gas, and coal, the world would not be currently able to provide enough natural resources to supply the food, heat, light, transportation, shelter, clothing, and other materials to support 1.2 billion people living in industrial society. This is not to mention the global population of 6.5 billion, most of whom aspire to the energy consuming lifestyle enjoyed by the minority.

Humans are one of only two mammals that will fight as an organized group against other groups in its species over resources. (The other includes some types of chimpanzees.)(1) *Generally, other mammals deal with scarce resources by migration and starvation. Some species of lemmings will even let their panic drive them to self-destruction by running into rivers and lakes while migrating.*

But humans get downright testy and mean when they're hungry. Time and again over recorded and unrecorded history, groups of humans fought over territory related to food and materials. It was so predictable, you could call it prerecorded history. Even wars over trade had links to critical resources. And now, with not enough land to provide for its lifestyle, the world is engaging in military actions to guarantee energy supply.

Most people in America have a hard time coming to grips with just how dependent we are on fossil fuels, and the desperate things we allow our government to do to get them. While Americans are generally aware that the country imports oil from dangerous places in other parts of the world, there is a disconnect between their morality and their needs. The average citizen just cannot imagine the level to which our country would carry on foreign intrigues and fight wars over what is generally viewed as a simple (and environmentally questionable) commodity. This story is written to help fill the gap.

The world energy situation is in many ways complex, but it rests on this simple concept of carrying capacity. If you come away with anything from this article, it should be what a precarious situation we have put ourselves in. Our economy, standard of living, and even our daily food have become highly dependent on politically fragile, culturally repressive, morally repugnant governments. To guarantee energy supply, our government must befriend and guard them.

Put even more simply, why would you build your house on an earthquake fault?

In This Section...

The "Petroleum Endowment Horseshoe" contains the world's largest oil and gas reserves.

The World's Service Station
Oil States of A Foreign Land

You are now entering the region called Petrolistan, which includes the contiguous area around the Arabian Peninsula, the territory surrounding the Caspian Sea, and a further area of Asia to the Caspian's south and west. It contains 9% of the world's land and an equally small share of its population.**(1)** But this highly unstable region gains a preponderance of the world's news headlines, in part because it contains an estimated 66% of the world's oil reserves and 47% of the world's natural gas reserves.**(2)** The United States now imports 58% of its oil, with 21% of its imports coming from this region of the world in 2004.**(3)**

Percentage of World Petroleum*

	% of World **Oil Reserves**	% of World **Gas Reserves**
Azerbaijan	0.6%	0.8%
Egypt	0.3%	1.0%
Iran	11.1%	15.3%
Iraq	9.7%	1.8%
Kazakhstan	3.3%	1.7%
Kuwait	8.3%	0.9%
Oman	0.5%	0.6%
Pakistan	0.0%	0.4%
Qatar	1.3%	14.4%
Saudi Arabia	22.1%	3.8%
Syria	0.3%	0.2%
Turkmenistan	0.0%	1.6%
Un. Arab Emir.	8.2%	3.4%
Uzbekitan	0.1%	1.0%
Yemen	0.2%	0.3%
Total	66.0%	47.2%

*** Stated Proven Reserves**

These resources are concentrated in a region surrounding the Persian Gulf, referred to by those in the petroleum industry as the "petroleum endowment horseshoe." There is also a large amount of oil in the neighboring region bordering the Caspian Sea.

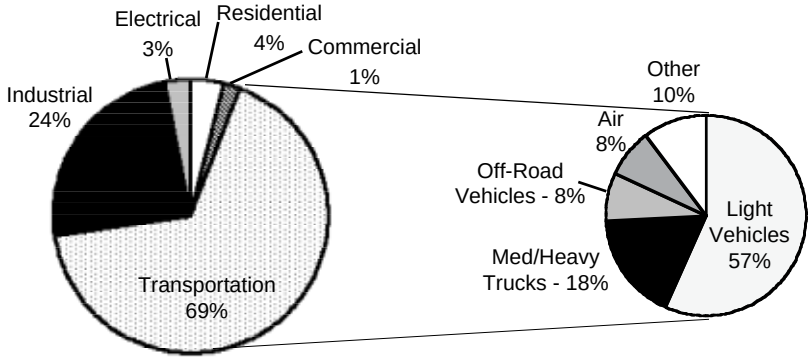
The actual quantities of these reserves are the subject of a highly charged debate. The percentage of reserves in the chart above is based on the 2005 edition of British Petroleum's *Statistical Review of World Energy*.**(4)** But this information is in turn based on what is provided by governments of oil producing states. And it is open knowledge in the oil industry that the reserve numbers of many governments are not accurate.

In the mid-1980s, the cartel of world oil producers, the Organization of Petroleum Exporting Countries (OPEC), changed the way they allotted quotas that helped control the world price of their oil. It became based on reserves. Between 1984 and 1988, each member state raised its reserve numbers astronomically to justify increased production. Depending on the state, the spike ranged from 24 to 200%.**(5)** More curiously, after close to 20 years, the reserves of most states stayed at the same level or have even risen. The bottom line is that though these states are believed to have the lion's share of the world's oil reserves, there may not be as much as is claimed.

Oil in the Caspian region has always been apparent. Marco Polo observed the "eternal pillars of fire" worshiped by the Zoroastrians in the 13th century in the area that is now Azerbaijan.**(6)** The temple that housed the pillars is believed to predate recorded history. These were fed by natural gas seeping through porous

Where The Oil Goes

Forty percent of the energy used in America comes from petroleum. In 2004, 58% of the U.S. oil supply came from imports, and 21% of those imports came from Petrolistan. Below is a breakdown of how this oil is used. Two-thirds of oil is used in transportation, and almost 2/3 of transportation petroleum (39% of total oil) is used in passenger vehicles.



limestone. Beginning in the late 19th century, prodigious oil production and refining in the Baku area made the region a world-class supplier. During W.W.II, the German army made a concerted and unsuccessful effort to capture the area to make up for its dire fuel shortage. (Lack of fuel was one of the largest reasons for the defeat of the Axis powers.)**(7)**

But from the Russian Revolution to the breakup of the USSR, these resources have been under Russian influence and generally denied to the West. Since 1991, when the former states of the Soviet Union claimed independence, there has been a concerted effort by the West to obtain drilling and pipeline concessions. There are claims that the Caspian contains more energy in oil and gas than Saudi Arabia claims to hold in reserves. But at best, only 20% of estimates are proven reserves, with the rest being unproven and speculative.**(8)** Caspian oil is also generally higher in price than Mid-East oil.**(9)** With demand and price skyrocketing, more oil is being produced in the region than ever.

Due to Central Asia's proximity to the Mid-East, and the Islamic heritage in much of the region, it has cultural ties that affect politics. For instance, the 9/11 terror attacks planned in Afghanistan were reportedly carried out because of anger about U.S. military presence in Saudi Arabia. For these reasons, it seems appropriate to include this part of Central Asia as part of the Petrolistan region.

New Imported Fuels

Some people might wonder why natural gas on the other side of the world is relevant to the United States, since it is impractical to import it via traditional pipelines. It is important for several direct and indirect reasons, foremost of which is that America is now a gas importing nation. Fifteen percent of U.S. natural gas consumption was provided by imports in 2004.**(1)** And despite phenomenal domestic drilling rates, U.S. production is staying flat.

Most U.S. gas imports currently come from Canada. But a small amount (2% of total U.S. use in 2004) is imported as Liquefied Natural Gas (LNG), where the gas is condensed to a tiny fraction of its volume by chilling it, and then transported in large (aircraft-carrier sized) tankers overseas.**(2)** The LNG is then regasified for domestic pipelines. LNG has been a commercial product since the 1960s, and 7% of the world's gas consumption in 2004 came from this source.**(3)**

Until recently, LNG has not been considered competitive as a major source for the U.S. market, but cost reductions in the technology, along with increased demand, have changed the picture. Canada's production is declining too, meaning that by 2015, as much as 28% of America's *current* consumption may be provided by LNG.**(4)** States in Petrolistan that produce LNG include Qatar, Oman, and the United Arab Emirates; states that plan to produce it include Iran and Egypt.

Natural gas can also be distilled into very clean, low-sulfur, high-quality diesel oil. The basic technology to convert "Gas-to-Liquids" (GTL) was invented in the 1920s. But it was not competitive with low-cost oil. With prices skyrocketing, things have changed. Currently there are only 4 plants in the world making this product, but a number of new ones are planned. The combined production level of existing and new plants is about 800,000 barrels per day (about 4% of U.S. total oil consumption).**(5)** The majority of this capacity will be in Qatar.

Historical Chart - The Oil We Bleed

The chart on page 4 explains the importance of oil production in the Mid-East and Caspian Basin, a.k.a. Petrolistan, and reasons for military adventures in the region.

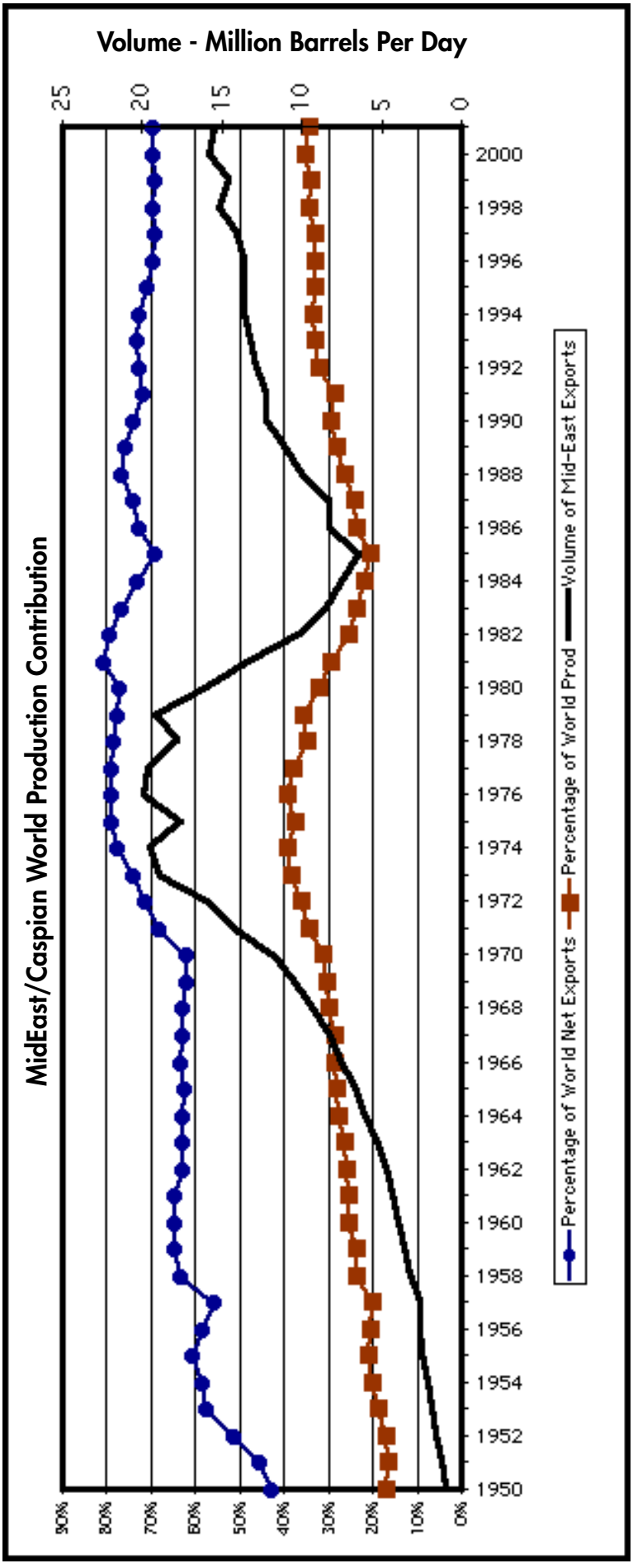
The United Nations began keeping detailed statistics on energy use and production in 1950.**(1)** In those days, the Middle East accounted for only 9% of total world production. But it supplied 40% of the "net exports," that is, the amount of oil supplied to the rest of the world after local supplies in each continent were accounted for. In 1992, the Caspian states began reporting statistics after independence from the former Soviet Union. Their production actually accounts for only a small fraction of the total in this chart, but this may increaese as oil production and infrastructure are ramped up. Today, the Mideast and Caspian supply about a third of the world's oil, but almost 70% of its net exports. Since 1957, the net export level from Petrolistan has never fallen below 60% and has at times been near 80%.

The U.S. became an oil importing nation in 1948 (3%).**(2)** This has risen to well over half of total use today. About 19% of U.S. imports came from Petrolistan in 2004.**(3)**

By volume, you can see the supply in millions of barrels per day (bpd). Petrolistan's production rose from a scant 1 million bpd in 1950 to over 20 million bpd in some years in the 1970s. It plummeted in 1980s to a low of 6 million bpd. Reasons for this include economic recessions, new oil fields in Alaska, Mexico, and the North Sea, and conservation efforts by industrial countries. But even at its low point, the Mid-East's *percentage* of net exports has not gone down noticeably.

As the 21st century begins, we see Petrolistan's supply going back up to 15 million bpd. This is due to record demand caused largely by increases in population, decreasing production in developed countries, and increasing industrialization and consumerism in countries like China and India.

And to the side of the chart is a timeline of major historical military and paramilitary events, most of them related to the supply of cheap oil.**(4)**



2002 U.S. prepares for Iraq invasion; terrorists attack oil tanker near Yemen
2001 9/11 attacks by Mid-East terrorists; U.S. invades Afghanistan
2000 Bombing of U.S. Cole (supporting naval blockade of Iraq)

1998 Terrorist bombings of U.S. embassies; U.S. attacks Iraq after it expels weapons inspectors; U.S. prepositions weapons in Middle East
1997 Unocal holds talks with Taliban about Caspian oil pipeline

1996 Saudi Arabian terrorists kill 19 Americans

1995 Terrorist attack in Saudi Arabia kills 5 Americans

1994 Territorial clashes between Yemen & Saudi Arabia; Iran & UAE

1992 Russia signs agreement allowing occupation of former military bases in Caspian; border clashes between Qatar & Saudi Arabia kill 3
1991 Allies invade Iraq; extensive post-war containment
Jul-90 Iraq invades Kuwait; U.S. initiates Desert Storm
1989 CENTCOM prepares battle plan for invasion of Iraq

1987 U.S. navy protects tankers in Iran/Iraq War

1980-1988 Iran/Iraq War, which leads to 1 million dead and $100 billion in property damages

1980 Carter establishes Rapid Deployment Force (now CENTCOM). Military bases established or enhanced, including Bahrain and Oman. Enhanced naval presence. Carter Doctrine threatens use of military if oil is jeapordized.
1979 Iran falls to Islamic militants; Carter threatens war if oil is blocked

Mid 70s Omani civil war

1975 Kissinger tells *Business Week* U.S will go to war over oil
1974 Alaska oil drilling begins as result of Arab oil embargo
Oct. 1973 Yom Kippur Arab/Israeli War followed by oil embargo
1971 Britain withdraws from all countries but Oman
1971 Iran seizes border islands from United Arab Emirates
1970 American "surrogate strategy" arms Iran and Saudi Arabia

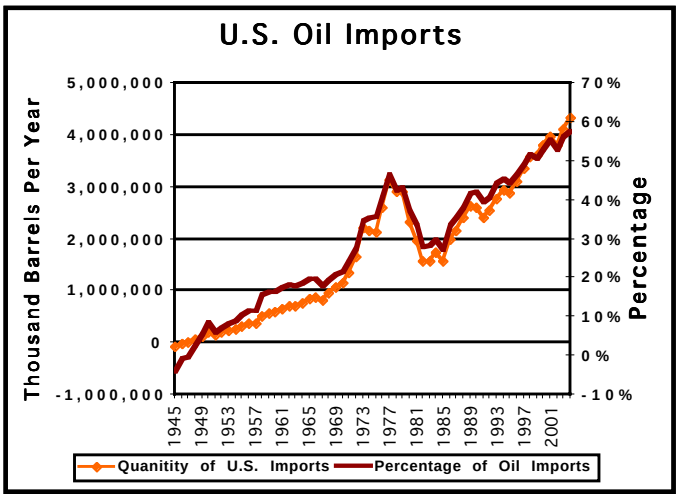
1968 Britain announces withdrawal from Middle East by 1971

1962-1967 U.S. provides Saudi Arabia with weapons for proxy war in Yemen

1957 Eisenhowar Doctrine promises military aid to Mid-East in case of Soviet attack
Jul-56 Egypt seizes Suez Canal (key oil route) and repels counterattack

Aug-53 CIA-led coup deposes Iranian Prime Minister

April 1951 Iran nationalizes oil industry, expelling British
1951 U.S. establishes militaary training program in Saudi Arabia
1949 CIA-backed coup topples Syrian government opposing oil pipeline



Petrochemicals are also made in Petrolistan. Saudi Arabia, for instance, manufactures 10% of all the petrochemicals in the world.**(6)** As U.S. natural gas feedstocks rise in price, chemical factories become less competitive compared to countries with lower cost fuel. Most of the methanol used in the U.S. is now imported. And according to one estimate, 50% of U.S. natural gas-derived fertilizer is now imported.**(7)** So inevitably, more of the globe's chemicals will be made in Petrolistan, while industrial countries lose jobs. The U.S. chemical industry lost 101,000 workers (10%) between 2000 and 2005; the plastics / rubber industry lost 141,000 (15%) in the same period.**(8)**

Another factor that can affect the U.S., albeit indirectly, is that many of the world's other nations will become increasingly dependent on imported natural gas products as well. And to the extent that our country is vulnerable to the world economy and the security implications of its fuel supply, we will be impacted.

As oil and gas production diminish in developed countries, their energy needs and economies will be increasingly fixated on imports – and protecting these imports. And Petrolistan will provide the lion's share.

Immediately after W.W. II, the U.S. was energy independent. It was America's domestic supply that provided for the war effort as well as exports for its allies. The first year it imported oil was in 1948 (3% of supply). This has increased to 58% in 2004.**(9)** Also following W.W. II, the world began to use increasing quantities of oil. This was driven by population growth, expanded industrialization, increasing use of personal autos, and a shift away from coal as the main power source for developed countries.

And as the U.S. and its allies became more dependent on Mid-East oil, military security became more pronounced. The chart on page 4 depicts United States military involvement in the region growing in sync with U.S. and world dependence on Petrolistan's oil.

When "Countries" Are "States"

In an attempt to understand the trends and patterns that make Petrolistan what it is, this article treats the 26 separate countries in the region as states inside of one large, contiguous nation. (It just happens to be the nation where the world obtains much of its petroleum.)

There are 26 such states in Petrolistan. They include the Mid-East states on and near the Arabian Peninsula: Bahrain, Djibouti, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, Turkey, the United Arab Emirates, and Yemen.

Two major oil-producing states of the former Soviet Union, Azerbaijan and Kazakhstan, are in this new country, as well as 6 former Soviet states that border them and whose politics affect transport routes. These include Armenia, Georgia, Kyrgystan, Tajikistan, Turkmenistan, and Uzbekistan.

Finally, the two large Central Asian states of Afghanistan and Pakistan have been annexed into this new country. They have little oil, but their territory may be vital to future transport routes, and their policies related to terrorism affect the stability of many other countries in Petrolistan and the world at large.

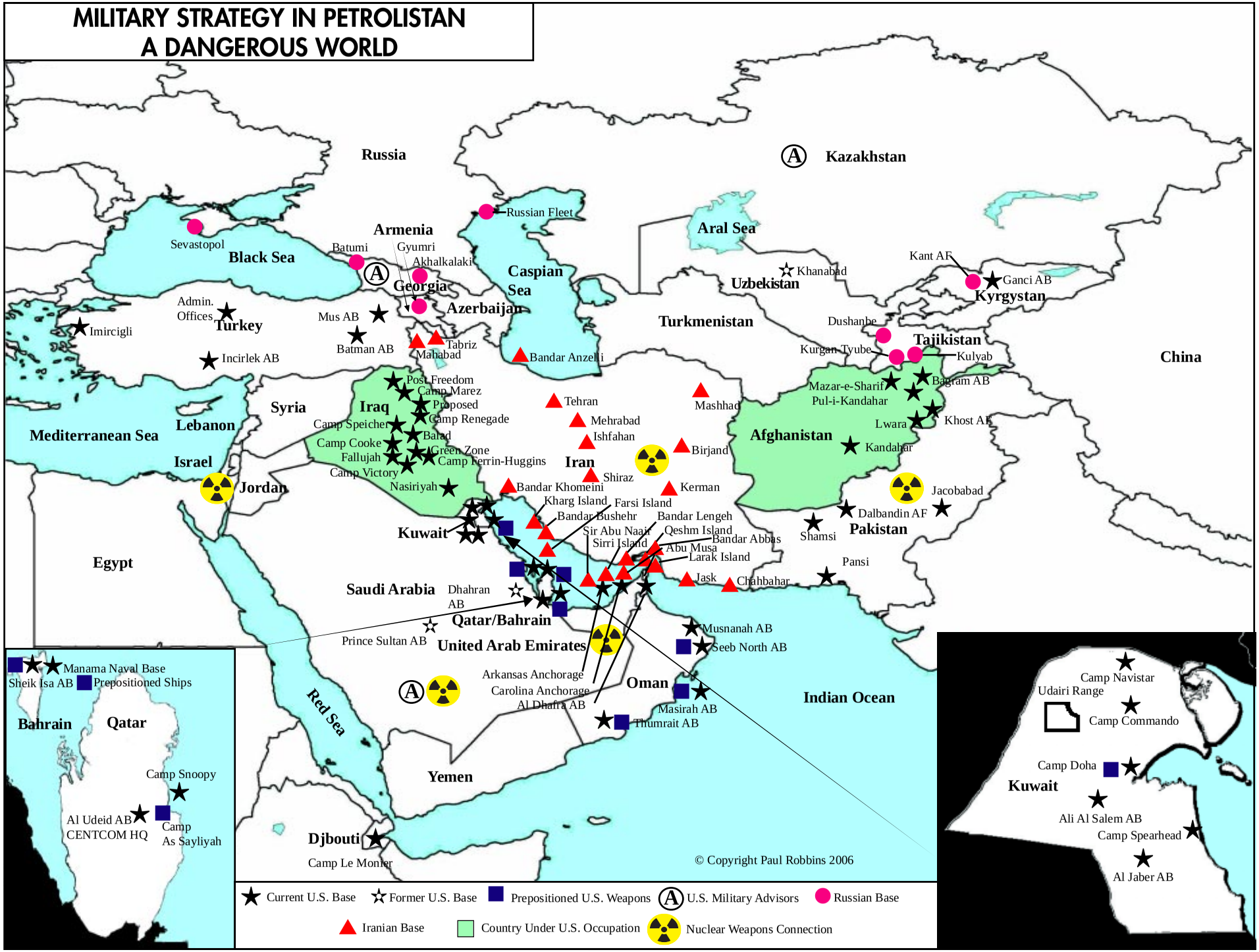
A Dangerous World
The Lay of the Land

Abandon All Hope Ye That Enter Here
—The legend above the gates of hell in Dante's Inferno

The U.S. currently has military bases in 11 states in Petrolistan. It has tried to acquire bases in at least 3 more (Azerbaijan, Georgia, and Kazakhstan).**(1)** It has military advisors in at least 3 states (Georgia, Kazakhstan, and Saudi Arabia).**(2)** The U.S. currently occupies 2 of these states, Afghanistan and Iraq, with no clear indication of when it will withdraw forces.

In the entire Petrolistan region, there is only one state that is overtly hostile to the U.S. – Iran. But in its own way, it is a formidable foe. Iran is the second most populated state in the region (68 million), with a military force of 520,000. While it is no military match to the U.S. or the combined forces of Europe, it can prove to be an awful menace if it chooses. About 15.5 million barrels a day (20% of the world's oil and 65% of its net exports) come through the Persian Gulf, which is about 600 miles long, and exits at the Strait of Hormuz.**(3)** Iran flanks the Gulf's entire eastern side. It has small navy bases that span the entire coast, replete with attack vessels, missiles, and mines. Iran's attacks on fuel tankers during the height of the 1987 "tanker war" were fended off only by a substantial naval presence by the U.S. and its European allies. Iran will also be an incorrigible enemy if invaded.

Russia has considered Central Asia and the Caucasus Mountain regions to be its backyard long before the creation of the USSR. Eight states in Petrolistan were at one time ruled by the former Soviet Union. In 1991, after these


MILITARY STRATEGY IN PETROLISTAN
A DANGEROUS WORLD
Russia
Kazakhstan
Armenia
Sevastopol
Black Sea
Batumi
Gyumri
Akhalkalaki
Georgia
Azerbaijan
Russian Fleet
Caspian Sea
Aral Sea
Khanabad
Uzbekistan
Kant AF
Ganci AB
Kyrgystan
Admin. Offices
Turkey
Imircigli
Incirlek AB
Mus AB
Batman AB
Tabriz
Mahabad
Bandar Anzeli
Turkmenistan
Dushanbe
Tajikistan
Kurgan-Tyube
Kulyab
China
Bagram AB
Mazar-e-Sharif
Pul-i-Kandahar
Lwara
Khost AB
Kandahar
Afghanistan
Mediterranean Sea
Lebanon
Syria
Iraq
Post Freedom
Camp Marez
Proposed
Camp Renegade
Camp Speicher
Balad
Camp Cooke
Fallujah
Green Zone
Camp Ferrin-Huggins
Camp Victory
Nasiriyah
Tehran
Mehrabad
Ishfahan
Mashhad
Birjand
Iran
Shiraz
Bandar Khomeini
Kerman
Israel
Jordan
Egypt
Kuwait
Kharg Island
Farsi Island
Bandar Bushehr
Bandar Lengeh
Sir Abu Nair
Qeshm Island
Sirri Island
Bandar Abbas
Abu Musa
Larak Island
Jask
Chahbahar
Jacobabad
Dalbandin AF
Pakistan
Shamsi
Pansi
Saudi Arabia
Dhahran AB
Qatar/Bahrain
Prince Sultan AB
United Arab Emirates
Musnanah AB
Seeb North AB
Arkansas Anchorage
Carolina Anchorage
Al Dhafra AB
Oman
Masirah AB
Thumrait AB
Indian Ocean
Red Sea
Yemen
Djbouti
Camp Le Monier
Manama Naval Base
Sheik Isa AB
Prepositioned Ships
Bahrain
Qatar
Camp Snoopy
Al Udeid AB
CENTCOM HQ
Camp As Sayliyah
Camp Navistar
Udairi Range
Camp Commando
Camp Doha
Kuwait
Ali Al Salem AB
Camp Spearhead
Al Jaber AB
© Copyright Paul Robbins 2006
Current U.S. Base
Former U.S. Base
Prepositioned U.S. Weapons
U.S. Military Advisors
Russian Base
Iranian Base
Country Under U.S. Occupation
Nuclear Weapons Connection

territories were granted independence, Russia continued strategic alliances and bases in the region. It currently has mutual defense agreements with all its former provinces, and has bases in at least 4 of these states.(4)

Both Russia and China covet the same oil sought by the United States. While these rivalries are usually limited to competing for oil concessions and pipeline routes, in the long run they could prove more dangerous. And terrorism, spawned by poverty, religious extremism, and anti-Western feelings, threatens governments and economic stability throughout Petrolistan.

Added to the dangers is the risk of nuclear weapons proliferation. At least 5 states in the region have nuclear weapons connections. Pakistan developed the technology in response to India's nuclear weapons and conducted tests in 1998.(5) But it then proceeded to sell the technology to other states, including Iran.(6) The United Arab Emirates has lax restrictions on shipping, and is believed to be the transfer point for Pakistani nuclear technology.(7) Iran seeks nuclear power generation for its domestic economy, including uranium enrichment technology that can also be used for weapons production.

Threatened by all its surrounding neighbors, Israel began working on nuclear weapons in the 1950s at a mysterious site in the Negev desert.(8) Originally labeled a "textile plant," it became known and inspected as an atomic research facility, but inspections ended in 1969. In 1979, several bright flashes in the South Atlantic were picked up by satellite, and some experts believed they were nuclear tests conducted by Israel. The open secret of the Israeli bomb was made public in 1986 when a whistleblower stung by conscience gave photographs to the *London Times* for publication.

And Saudi Arabia has been accused of several attempts to procure nuclear weapons, though this has never been officially acknowledged by either the U.S. or Saudi governments. According to some accounts, Saudi Arabia first tried to fund the rebuilding of Iraq's Osirak reactor after it was destroyed by Israel in a preemptive strike in 1981.(9) In 1991, a prominent former diplomat with the Saudi government claimed to have evidence that Iraq's nuclear weapons research was being funded by his country until the Gulf War began.(10) There is also concern that the Kingdom has tried to secure nuclear technology from Pakistan, with Israeli officials going so far as to make this accusation in 2003.(11) One theory is an "oil for nukes" trade.

It Came in Waves
The U.S. Military Buildup in Petrolistan

The U.S. military buildup in the Mid-East and the Caspian occurred slowly over decades. Like any valuable, scarce resource, it is no surprise that oil is carefully guarded. But no one could have predicted the way this onsite security evolved and escalated over the decades. And even in a general way, few could have predicted the magnitude of it.

The Cold War (1950): It began with bases in Bahrain, Turkey and Saudi Arabia.

In Bahrain in 1950, the U.S. leased part of a British naval facility and established a small service office for three ships that regularly patrolled the region. When the British left in 1971, the U.S. subsequently leased the port from the island government. There were probably no more than 100 personnel assigned to the base.(1)

Beginning in 1951, the U.S. established bases in Turkey to respond to the Cold War threat to oil in the Mid-East. Saudi Arabia's Dharan airbase was transformed from a lonely WWII U.S. outpost used for rescue missions to a full base that was operated until 1962.(2) Also beginning in 1951, America established a formal military training program for Saudi Arabia.(3) The U.S. began selling it weapons in 1953, and the Kingdom received military aid of $177 million (in 2000 dollars) between 1957 and 1974.(4) Between 1962-67, America supported Saudi Arabia in a proxy war in Yemen, in which Arab nationalists backed by Egypt fought Yemeni royalists.(5) America was also prepared to intervene if Saudi Arabia's security was threatened.(6)

The U.S. also had strong ties to the Iranian military. Formalized in 1947, the U.S. provided training and weapons.(7) Between 1950 and 1979, the U.S. provided $4.3 billion in military aid (2004 dollars), while selling Iran $26 billion in weapons (2000 dollars).(8)

Arming Allies (1973): In 1973, the reliance on Saudi Arabia and Iran became much more formalized with President Richard Nixon's "surrogate strategy."(9) The U.S. was shy about direct intervention at the time because of its controversial involvement in Vietnam. This doctrine considered the region vital to U.S. interests because of oil exports to the U.S. and the world, but assisted these 2 states in defense of the region rather than deploying U.S. forces directly. These key allies, also the region's most prolific oil producers, were the "cop on the beat." Weapons sales markedly increased. Between 1973-79, Saudi Arabia received $18 billion in weapons, while Iran received $24 billion (2000 dollars).(10)

This is not to say that there was no American military presence. Both states were provided with military and civilian advisors and technicians to instruct the armed forces in the use of these weapons, to provide maintenance for them, and to foster cooperation. At one point in 1977, there were 6,250 advisors in Iran and 4,140 advisors in Saudi Arabia.(11)

Rapid Deployment Force (1980): The1979 Iranian revolution that brought to power a fundamentalist, anti-American regime sent a powerful shock throughout the world. All the weapons that had been sold to the Iranians fell into the new government's hands. Due to cutbacks in Iran's oil production, world oil prices reached record levels that have not been seen since, dramatically affecting the economies of industrial nations. And there was deep concern that other Mid-East nations would be threatened. In 1980,

Russia invaded Afghanistan, which was seen by America at the time as a possible threat to Mid-East oil.

President Jimmy Carter created the Rapid Deployment Force in 1980 as a deterrent to further actions that could endanger oil imports. Bases were created in Oman, Somalia, the island of Diego Garcia in the Indian Ocean, and in emergency situations, Egypt. The Rapid Deployment Force strategy was continued under successive Presidents. It was the predecessor of today's Central Command (CENTCOM).**(12)**

Tanker Escorts (1987): The U.S. again raised its military presence, albeit briefly, in 1987 at the height of attacks on oil and fuel tankers in the Persian Gulf during the bloody war between Iran and Iraq.**(13)** Between 1981 and 1987, approximately 395 tankers were attacked by both sides. These attacks came predominantly from mines and small navy craft (Iran's weapons of choice), though air attacks from planes and occasional missiles were also employed. In 1987, the U.S. was asked by the government of Kuwait to "reflag" tankers carrying Kuwaiti product in order to offer official protection via naval escort and military guard.

During the most intense period in late 1987, the U.S. deployed 39 ships to the region for the program. But the tanker attacks also brought a naval presence from Britain, France, The Netherlands, Belgium, Italy, the People's Republic of China, and the USSR. Japan contributed to the financing of military protection. Much of the non-U.S. presence was in the form of mine sweepers.

At the time, U.S. land bases were not politically possible in the Gulf. But the U.S. created temporary bases on barges off the coasts of Bahrain, Kuwait, and Saudi Arabia.

Though the U.S. military had few recorded casualties from the reflagging program, an Iraqi fighter plane killed 37 U.S. Navy personnel in an attack on the U.S.S. Stark before the escort program began.

Post Desert Storm (1991): The expansion of U.S. military forces in Petrolistan took a quantum leap after Desert Storm in 1991, when the U.S. expelled Iraqi forces from Kuwait. (Kuwait is the only country in the world shaped like a combat helmet.)

The U.S. established permanent bases. The Bahrain naval base was greatly expanded, and bases or troop presence were also established in Saudi Arabia, the United Arab Emirates, Qatar, and Kuwait.**(14)** At the time of 9/11, it was estimated that U.S. military personnel in the area numbered about 28,000 (including Naval personnel afloat).**(15)**

In addition to these troops are locations for prepositioned equipment. You might call them "dehydrated bases." (Just add soldiers.) In many of these host states, the presence of U.S. forces is controversial. So in order to reduce the number of troops on the ground while maintaining readiness for an operation, the U.S. has stored weapons in Bahrain, Kuwait, Oman, and Qatar. Prepositioned weapons are also stored in ships in the Persian Gulf.**(16)** There was enough "floating" heavy equipment in the late 1990s for 15,000 troops.**(17)**

Post-9/11 (2001): It is common knowledge that the terrorist attacks of 9/11 ratcheted up America's involvement in Afghanistan. Long after the ouster of the Taliban, the U.S. still had about 16,500 troops inside its borders in 2006.**(18)** But the U.S. also has posts in Pakistan, and established bases in the former Soviet Republics of Kyrgyzstan and Uzbekistan.**(19)** Russia had first approved these bases to support the U.S. anti-terrorism efforts in Afghanistan. But many Kremlin officials are now irked that the U.S. has used their support after 9/11 as an entry vehicle to their own political backyard. The U.S. was asked to vacate its base in Uzkekistan in 2006 as retaliation for public criticism of Ukbek human rights abuses.

The U.S. has also sent military advisors to Georgia and Kazakhstan. In fact, the U.S. is paying for a military base for Kazakhstan's navy, and is seeking bases in Kazakhstan and Azerbaijan (the major oil producers in the Caspian Sea region), and Georgia (where key pipelines are located).**(20)**

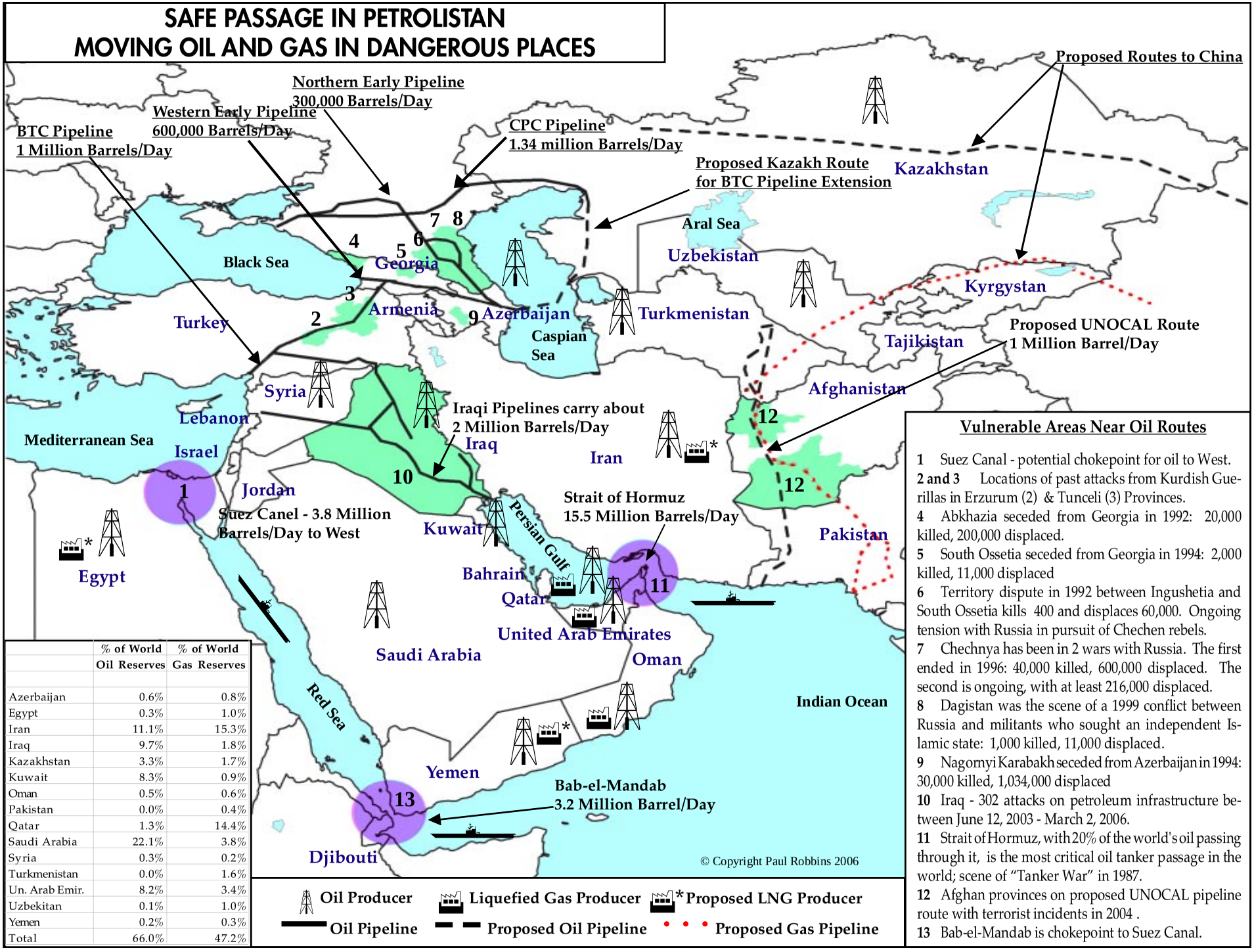
Invasion of Iraq (2003): Finally, the U.S. invasion of Iraq has boosted the presence of U.S. forces in the region to unprecedented levels. At the end of 2005, the Dept. of Defense officially estimated military personnel involved in Operation Iraqi Freedom to be 207,000, though this included support in the region, as well as troops rotating in and out of the region.**(21)** Estimates of troops on the ground in Iraq stand at about 130,000 as of March 2006.**(22)** In addition, there are about 7,500 troops in other states in Petrolistan not directly associated with the occupations of Iraq and Afghanistan.**(23)** On the map of Petrolistan, only 12 base locations in Iraq are included because these are predicted to be sites for permanent ("enduring") bases. But Iraq is a state under occupation, and there have been more than 100 bases in the theatre. It would take several pages to accurately map all these locations.

Apparently, there are still U.S. troops in Saudi Arabia. One of the stated reasons for the terrorist attacks of 9/11 was the resentment by religious extremists of U.S. forces stationed in the Kingdom. After the U.S. invaded Iraq, it announced that it would leave its outpost at Prince Sultan Airbase. But American forces were still in the Kingdom as military advisors, about 300 strong as of March 2004.**(24)**

Half the Fun Is Getting There

Even under the best of circumstances, pipelines and tanker routes that transport volatile fuels are dangerous. In the U.S., which is largely free of terrorism, there were 8,114 pipeline accidents or problems between 1986 and 2005. These were responsible for 440 deaths, 1,967 injuries, and almost $2.5 billion in damages (2005 dollars).**(1)** Almost half of these incidents involved liquid fuel pipelines that spilled 1.9 million barrels into the environment.**(2)**

SAFE PASSAGE IN PETROLISTAN
MOVING OIL AND GAS IN DANGEROUS PLACES



	% of World Oil Reserves	% of World Gas Reserves
Azerbaijan	0.6%	0.8%
Egypt	0.3%	1.0%
Iran	11.1%	15.3%
Iraq	9.7%	1.8%
Kazakhstan	3.3%	1.7%
Kuwait	8.3%	0.9%
Oman	0.5%	0.6%
Pakistan	0.0%	0.4%
Qatar	1.3%	14.4%
Saudi Arabia	22.1%	3.8%
Syria	0.3%	0.2%
Turkmenistan	0.0%	1.6%
Un. Arab Emir.	8.2%	3.4%
Uzbekitan	0.1%	1.0%
Yemen	0.2%	0.3%
Total	66.0%	47.2%

Vulnerable Areas Near Oil Routes

1 Suez Canal - potential chokepoint for oil to West.

2 and 3 Locations of past attacks from Kurdish Guerillas in Erzurum (2) & Tunceli (3) Provinces.

4 Abkhazia seceded from Georgia in 1992: 20,000 killed, 200,000 displaced.

5 South Ossetia seceded from Georgia in 1994: 2,000 killed, 11,000 displaced

6 Territory dispute in 1992 between Ingushetia and South Ossetia kills 400 and displaces 60,000. Ongoing tension with Russia in pursuit of Chechen rebels.

7 Chechnya has been in 2 wars with Russia. The first ended in 1996: 40,000 killed, 600,000 displaced. The second is ongoing, with at least 216,000 displaced.

8 Dagistan was the scene of a 1999 conflict between Russia and militants who sought an independent Islamic state: 1,000 killed, 11,000 displaced.

9 Nagornyi Karabakh seceded from Azerbaijan in 1994: 30,000 killed, 1,034,000 displaced

10 Iraq - 302 attacks on petroleum infrastructure between June 12, 2003 - March 2, 2006.

11 Strait of Hormuz, with 20% of the world's oil passing through it, is the most critical oil tanker passage in the world; scene of "Tanker War" in 1987.

12 Afghan provinces on proposed UNOCAL pipeline route with terrorist incidents in 2004 .

13 Bab-el-Mandab is chokepoint to Suez Canal.

Imagine what it would be like to have a vulnerable oil and gas transportation network next to a shooting war.

You don't have to imagine. Reviewing recent history, and the map of transport routes, you can see it.

Iraq - One need look no further than Iraq. Most of Iraq's oil is transported via pipeline to the Persian Gulf for tanker export, though as much as 1/5 of it is exported via pipeline through Turkey. Between June 2003 and March 2, 2006, at least 302 violent incidents involving the country's oil operations occurred, including attacks on infrastructure and assassinations of company executives and security forces.**(3)** At times the damage has been so major and repair delays so long that it drove up international oil prices.

Caspian Sea - In Northeast Petrolistan, several pipelines, existing and proposed, convey or will convey newly found Caspian oil from Azerbaijan and Kazakhstan to the West. In the northern part of the Sea region, the Caspian Pipeline Consortium (CPC) Pipeline has a capacity of 565,000 barrels per day of oil from the Tengiz oilfield in Kazakhstan to the Russian port of Novorossisk on the Black Sea 990 miles away. It is planned to carry 1,340,000 barrels per day by 2015, and has a total cost of $4.2 billion.**(4)**

In the Southern Caspian Sea area, there are at least 3 pipelines that are vulnerable to attack.

1. Baku-Supsa (Early Oil Western Route) Pipeline – This can transport 145,000 barrels per day from the Azerbaijan port of Baku on the Caspian to the Black Sea via Georgia. At 515 miles, it can be expanded up to 600,000 barrels per day at a total cost of $600 million.**(5)**

2. Baku-Novorossiysk (Early Oil Northern Route) Pipeline – It has a transport capacity of 100,000 barrels of oil a day from Baku to Novorossisk, a distance of 868 miles. It can be upgraded to a capacity of 300,000, for a total cost of $600 million.**(6)**

3. Baku-Tblissi-Ceyhan (BTC) Pipeline – This 1,038 mile line runs from Baku in Azerbaijan to Tblissi in Georgia to Ceyhan in Turkey. The $2.9 billion project is intended to carry 1 million barrels per day of Caspian oil to the West and avoid Russia altogether.**(7)** Russia is particularly concerned with the BTC Pipeline, which is a blatant effort by Western firms to transport oil to the West to bypass Russian influence and pipeline fees.

All 4 routes have security problems. The region is highly unstable. The CPC pipeline runs 100 miles north of the violent areas of Chechnya, Dagistan, and Ingushetia, where freedom fighters (to the Russians, terrorists) seek or have sought independent states.**(8)** The Northern Early runs right through them. The attacks have already begun. In January 2003, the Baku-Supsa line in Georgia was sabotaged, leading to a significant oil spill. In February 2003, U.S. miltary training in Georgia was expanded to build an elite 400-man pipeline protection battalion with the express purpose of defending the BTC route.**(9)**

The Western Early runs through Azerbaijan and Georgia. The territory of Nagorno-Karabakh has violently seceded from Azerbaijan.**(10)** The provinces of South Ossetia and Abkhazia have seceded from Georgia.**(11)** The secessionists in these provinces were aided by Russia; among the motives attributed to the Russians for their part in these bloody struggles is to keep Georgia in its political orbit. In Abkhazia alone, there were 1,700 Russian "peacekeeper" troops in 2001.**(12)** In 2002, Russia went much further and offered its citizenship to Abkhazia's residents.

Security concerns are at least as worrisome to the pipelines located to the north. In addition to the dangers from conflicts already mentioned, BTC is vulnerable to sabotage in Turkey. Guerrilla fighters from the long-oppressed Kurdish minority have been at war with the Turkish government since 1984. During the conflict, Turkish oil infrastructure has been attacked numerous times.**(13)** A section of Turkish territory was under a state of emergency until a settlement was reached in the summer of 2002.**(14)** But another oil pipeline was subsequently bombed in October 2004.**(15)** Turkish provinces that the BTC line runs in or close to include Tunceli and Erzurum, both of which experienced terrorist violence during the conflict.

Afghanistan - Another pipeline route with security flaws is the proposed 1 million barrel per day Central Asia Oil Pipeline. It was touted in 1994 as a way to convey oil south from the Caspian states of Kazakhstan and Turkmenistan through Afghanistan and on to the seaport of Gwadar in Pakistan. One of the champions of this concept, American-based UNOCAL, tried to negotiate a deal with the Taliban rulers in Afghanistan for several years. But with the 1998 bombings of the U.S. embassies in Kenya and Tanzania by Afghan-based terrorists under the Taliban's protection, the company was forced to abandon the effort.

Shortly after the U.S. invaded Afghanistan in 2001, it installed Harmid Karzai as temporary President. Karzai was a former consultant for the UNOCAL project.**(16)** The U.S. also appointed Zalmay Khalilzad as its envoy to the state.**(17)** He also was a former consultant to the project. So it was no surprise when Karzai signed an agreement for the pipeline proposal on May 29, 2002.

But despite this hollow gesture, most of Afghanistan is in a lawless and unstable condition. The proposed oil pipeline, and another for natural gas, run through at least 4 provinces of the state that have been subject to repeated incidents of terrorism or fighting between rival factions and warlords. With the projected costs at $2.5 billion, it is almost impossible for such a project to be financed and built, let alone operated, until conditions improve.

One final note is that China is acquiring drilling concessions for Kazakhstan oil. The proposed pipeline routes shown on the map are not in any critical danger of attack at this time. But they do reveal that competition with other countries may deprive the West of this prize.

Tanker Routes in the Persian Gulf - Two tanker routes in the Persian Gulf are also of huge concern. The route through the Strait of Hormuz is the most critical energy chokepoint in the world, transporting as much as 15.5 million barrels per day, equivalent to 20% of the world's production and 65% of its net exports.**(18)** Though it is currently a relatively safe environment, it was part of the war zone in the Iran-Iraq War that lasted from 1980-1988.**(19)** During this time, there were 395 attacks on fuel tankers. Things became so dangerous that navies of the U.S. and some European nations intervened to protect tanker traffic in 1987.

The Strait itself is only 6 miles wide, and the journey to the far end of the Gulf is 600 miles long. A worst-case scenario would be a sequel to *Apocalypse Now*, with mines, missiles, and patrol boats attacking in guerilla raids.

Another chokepoint is the southern entrance to the Red Sea, Bab-el-Mandab, only about 11 miles wide. The 3.3 million barrels per day that pass through it goes mostly to the West via the Suez Canal or the Sumed Pipeline that runs near to it.**(20)** Though it has not come under great threat, the French tanker Limburg was attacked in a terrorist incident off the coast of Yemen on October 2, 2002.

The Suez and the Sumed transport 3.8 million barrels of oil per day. During wars in 1953 and 1967, the canal was closed to tanker traffic due to military conflict.

The Price of Freedom

The Cost of U.S. Military Presence And U.S. Financial Aid

If you think of Petrolistan as a giant oil refinery, you can consider U.S. armed forces as onsite security. This security system includes military bases, naval presence of the Fifth Fleet, high-tech fighter planes, spy satellites, and by extension, part of our country's diplomatic corps. The U.S. military presence to defend Petrolistan does not come cheaply.

Several studies done by government agencies or private organizations have attempted to estimate the cost of defending the Persian Gulf. And there have been estimates of the costs for the 1987 tanker war, Desert Storm in Iraq in 1991, Operation Iraqi Freedom in 2003, and Operation Enduring Freedom in Afghanistan in 2001.

Combat Expenditures

Since 1990, at least 6 studies have tried to quantify the costs of defending the Persian Gulf alone. *The costs range from $21 to $92 billion per year in 2005 dollars.* The amount of oil imported by the U.S. differs from year to year.**(1)** By applying import statistics for 2004 to these studies and the current war in Iraq, and 1991 import statistics for Operation Desert Storm, these annual costs translate to an additional $24 to $101 per barrel for oil from the region.**(2)** (Between 1990 and 2004, Persian Gulf oil was between $17-28 a barrel.**(3)** By December 2005, prices had risen to $53 a barrel.)**(4)**

This means that if you paid for military security at the gas pump, it would cost 69¢ to $2.97 a gallon for gas coming from the Middle-East, or 8¢ to 36¢ a gallon extra assuming the cost of protecting Mid-East gasoline was averaged into the cost of all gasoline. It would cost the average vehicle owner about $46-198 annually.**(5)**

In normal years, this military funding includes a troop presence of about 28,000. But there is nothing about the region's dangerous military condition that is normal. Since 1987, there has been an escalating military presence in the region.

• In 1987, the U. S. sent Navy ships to escort oil tankers in the Persian Gulf to defend them from attacks by Iran and Iraq, which were then at war with each other. Worldwatch Institute calculated that at the time, the amount of money spent to defend the oil was equivalent to $26 per barrel, which was more than the cost at that time to purchase and ship it.**(6)**

• The first U.S. war in Iraq, Operation Desert Storm in 1991, cost $97.2 billion (2005 dollars), about $20 billion of which came from the U.S.**(7)** There were only 346 U.S. deaths in that war, but about 158,000 Iraqis lost their lives, most of them civilians.**(8)** After the war, about 135,000 U. S. Gulf War veterans (roughly 1/5 of the total Desert Storm force) became afflicted with Gulf War Syndrome, a group of various illnesses affecting the digestive and central nervous systems.**(9)** Tax dollars continue to pay for these veterans' health care.

Some might argue that if the cost of Gulf War were factored into the price of gasoline, it would have been amortized over several years. But if the cost of this war had

THE PRICE OF FREEDOM – HIDDEN COSTS OF PROTECTING MID-EAST OIL

Studies	Year of Study	Cost Per Year (Billion 2005$)	Cost of Protection Per Barrel For Mid-East Oil	Cost of Protection Per Gallon of Gasoline For Mid-East Oil	Cost of Protection Per Gallon of Gasoline Averaged For All Oil	Added Cost Per Car (Annual)
Oak Ridge National Laboratory	1990	$21	$24	$0.69	$0.08	$46.16
General Accounting Office	1990	$50	$54	$1.60	$0.19	$106.52
Brookings Institute	1991	$92	$101	$2.97	$0.36	$198.19
Cato Institute	1992	$69	$76	$2.23	$0.27	$149.22
University of CA - Davis	1996	$25	$27	$0.80	$0.10	$53.33
National Defense Council Foundation	2003	$52	$57	$1.67	$0.20	$111.28
Desert Storm	1991	$20	$30	$0.87	$0.10	$52.86
Operation Iraqi Freedom	2003	$73	$81	$1.63	$0.29	$157.62

been added to the price of oil in that one year, it would have cost the U.S. an additional $30 per barrel for oil imported in 1991. This would have raised the U.S. cost of a gallon of gas 87¢ for fuel from the Mid-East, or 10¢ if averaged over all gas used. It would have cost the average vehicle owner about $53.

• The second U.S. war in Iraq, Operation Iraqi Freedom, has cost at least $73 billion a year (2005 dollars for U.S. costs only).**(10)** Between the time combat was initiated and March 23, 2006, it has also cost invading forces 2,529 dead; U.S. casualties included 2,322 dead and 16,653 wounded (almost half of them seriously).**(11)** Civilian casualty estimates range from 33,773 to 37,895 (as of March 14, 2006), not including 7,312 killed in the invasion.**(12)** Cases of long-term illness such as those linked to Gulf War Syndrome have not yet been documented. But critics suspect such repercussions from the use of ammunition made from depleted uranium.

If the yearly cost were added to the price of oil, it would amount to an additional cost of $81 a barrel for the U.S. or $7 per barrel worldwide.**(13)** This would raise the U.S. cost of a gallon of gas $1.63 for fuel from the Mid-East, or 29¢ if averaged over all gas used in the country. It would cost the average vehicle owner about $158 annually.

• The 2001 conflict in Afghanistan, Operation Enduring Freedom, was not fought exclusively over oil. But some of its roots are in the politics of oil imports. One of the stated reasons for the 9/11 terrorist attacks was the objections of religious extremists to U.S. forces stationed in Saudi Arabia. The main reason U.S. forces were stationed there was to prevent Iraq from engaging in further hostilities against surrounding oil states. And one of the main reasons that terrorists received their original training and weapons in the first place was the U.S. funding of the Afghan resistance during the Soviet occupation in the 1980s. This was done because at the time the Soviet occupation was considered a threat to Mid-East oil exports. The U.S. has spent approximately $76 billion to maintain its presence in Afghanistan from 9/11 through 2005 (2005 dollars).**(14)**

But then there is the cost of not defending the oil. The U.S. has become so dependent on imports that historical supply disruptions and their attendant price hikes have wrought havoc on the American economy. While U.S. imports from Petrolistan make up a small amount of the total (12% in 2004), the entire supply of world oil would gravitate to high global prices in the wake of a Mid-East shortage.

The oil price hikes of 1973, 1979, and 1991 were the cause of major U.S. recessions causing a net loss of Gross Domestic Product and increases in interest rates, as well as unemployment and privation caused by them. One calculation holds that these 3 disruptions cost the U.S. economy between $2.2–2.5 trillion, or $75 - 83 billion annually over the last 30 years, or up to $122 per barrel of oil coming from the Middle East (current dollars).**(15)** This cost does not attempt to calculate the damage to the *global* economy.

U.S. Aid to Petrolistan - Billions of 2004 Dollars
1946-2004

	Total Grants & Loans	Military Grants & Loans
Israel	$149.9	$93.8
Egypt	$90.1	$42.0
Turkey	$57.4	$35.9
Pakistan	$39.0	$7.7
Iraq	$17.4	$2.3
Iran	$15.8	$7.0
Jordan	$15.6	$5.7
Afghanistan	$7.2	$1.0
Other Mid-East Countries	$7.7	$0.8
Former Soviet Union	$7.0	$0.3
Saudi Arabia	$3.2	$1.4
Lebanon	$2.3	$0.6
	$412.5	$198.4

Numbers may not total due to rounding.

One final note of irony is the amount of oil used by the U.S. military itself: almost 300,000 barrels per day, which is roughly 1.5% of all oil used by America in 2003. Modern warfare is a gas guzzler.**(16)**

Cost for U.S. Military and Economic Aid

Besides the direct cost for military presence in Petrolistan is the cost of U.S. military and economic aid, often used as a way to win friends and influence people. Between 1946 and 2004, the U.S. has literally spent $413 billion in the region (2004 dollars).**(1)**

It must be pointed out at the onset that not all of this money was directly linked to oil. About 36% was given to Israel, which has no oil exports, pipeline routes, or role in protecting the petroleum infrastructure.

Egypt became a U.S. ally after its peace treaty with Israel in 1979, after which both U.S. military and economic aid skyrocketed. Egypt is a moderate oil producer and has a key oil chokepoint at the Suez Canal. (Soon it will also be exporting Liquefied Natural Gas.) It was also one of the instigators of the 1973 Arab Oil Embargo, having persuaded other Arab states to withhold oil from the West when it attacked Israel. Having this state as a friend did not hurt or hinder the U.S. position on energy. But petroleum was only one of several motivations for the increased aid. The normalization of its relationship with Israel served as the most important catalyst for U.S. assistance.

But aid to Turkey and Pakistan had a more direct oil link. Military alliances, bases, and foreign and economic assistance in Turkey began in 1948, but expanded greatly in 1951 as the U.S. sought NATO bases to protect the Mid-East from incursion by the Soviet Union.**(2)**

And Pakistan was supported as an ally against the

Russian occupation of Afghanistan, which at the time was seen as a direct threat to Mid-East oil.(3) Pakistan funneled billions of dollars worth of weapons and other military support to Afghan freedom fighters. Between 1983 and 1990, $7.6 billion (including $3.3 billion for direct military aid) went into funding this proxy war through Pakistan. For the next decade, funding was largely curtailed until Operation Enduring Freedom. Between 2002-4, Pakistan received $1.9 billion for its assistance in fighting the Afghan Taliban. Afghanistan has received $7.2 billion since 1946, 56% of it after 2001.

Aid to the Mid-East was most pronounced in Iran, which received $15.8 billion. Almost all of this happened before 1973, when Iran began buying huge quantities of U.S. weapons under the Nixon "surrogate strategy" designed to help Mid-East states to defend themselves in lieu of direct U.S. involvement.

During the 1980s, the U.S. was concerned that Iran was gaining the upper hand in the Iran-Iraq War. Since the U.S. despised Iran because of the infamous 1979 capture of American embassy personnel, it secretly provided Iraq with an estimated $5 billion (current dollars in the late 1980s) in financing for weapons and agriculture not recorded in this analysis.(4)

Iraq has received $12.3 billion in aid since the U.S. invasion in 2002; over 1/3 of this was military aid. Most other Mid-East states have received more modest amounts of aid, most notably Jordan, Lebanon, and Saudi Arabia.

The 8 former Soviet states in Petrolistan only began receiving money in 1992, and have collectively received $7 billion. Military aid, though relatively small, largely came after the U.S. invasion of Afghanistan and the creation of American bases in the region.

Costs to Petrolistan States

While these costs incurred to the U.S. taxpayer are a phenomenal subsidy to the oil and auto industries, they are not by any stretch the only money spent for military security. The money spent by Petrolistan states themselves makes it one of the most militarized regions of the world. Petrolistan states are quite wary of their neighbors, and several of them are concerned about internal rebellions and terrorism as well.

An important indicator of military intensity is the percentage of a state's economy (Gross Domestic Product) spent on its military budget.(1) There are 165 governments in the world for which this is estimated. Of the states in Petrolistan for which there is information, 8 states are in the exclusive list of the world's top 10 for percentage of their economy spent on the military. Thirteen states in Petrolistan are on the list of the world's top 25 states for this measure. Only 4 rank at or below the world average (some of the former Soviet states).

MILITARY SPENDING AS PERCENT OF ECONOMY

Country	Percent of GDP (2006)	Dollars Per Capita Rank
Jordan	14.6%	1
Oman	11.4%	3
Qatar	10.0%	5
Saudi Arabia	10.0%	6
Israel	8.7%	7
Yemen	7.8%	8
Armenia	6.5%	9
Bahrain	6.3%	10
Syria	5.9%	13
Kuwait	5.3%	15
Turkey	5.3%	16
Pakistan	4.9%	19
Djibouti	4.4%	23
Tajikistan	3.9%	29
Egypt	3.4%	33
Turkmenistan	3.4%	34
Iran	3.3%	35
Lebanon	3.1%	40
United Arab Emirates	3.1%	42
Afghanistan	2.6%	50
Azerbaijan	2.6%	51
WORLD AVERAGE	2.0%	
Uzbekistan	2.0%	78
Kyrgyzstan	1.4%	114
Kazakhstan	0.9%	141
Georgia	0.6%	155
Iraq	NA	NA

Where the Money Went

Part of this military cost to Petrolistan states is for the purchase of U.S. weapons. U.S. government authorization of sales of its sophisticated weapons is a key method of winning influence. Most of these sales are commercial, though some are subsidized by the U.S. grants or loans.

On the Arabian Peninsula alone, $153 billion in U.S. weapons have been purchased between 1950 and 2002 (2000 dollars).(1) Over 2/3 of this came from Saudi Arabia.

Purchases of U.S. Weapons 1950-2002
(Millions of 2000 dollars)

Bahrain	$1,804.3
Egypt	$22,724.8
Iran	$26,033.8
Iraq	$56.3
Kuwait	$8,569.9
Oman	$255.9
Qatar	$9.5
Pakistan	$4,624.7
Saudi Arabia	$105,266.5
Turkey	$14,592.9
United Arab Emirates	$2,043.3
Yemen	$583,033.8
Former Soviet States	$25,889.9

Numbers may not total due to rounding.

Another $26 billion was purchased by Iran before its revolution in 1979. The vast majority of these purchases in Saudi Arabia, Iran, and Kuwait came after the start of the "surrogate strategy" in the early 1970s, when the U.S. goal was to arm allies as opposed to maintaining a direct military presence. Iraq made tiny purchases between 1957 and 1971.

Turkey, a key NATO ally located near the Arabian Peninsula, has purchased almost $15 billion of U.S. weapons, almost all of it since 1973. It has also received $35 billion of U.S. military aid, about half of it before these weapons sales began. Egypt has purchased almost $23 billion, almost all of it after it signed the 1979 peace accord with Israel. And Pakistan has purchased almost $5 billion. Almost 3/4 of this occurred during the Russian occupation of Afghanistan, when the U.S. used Pakistan to fight its proxy guerilla war.

The former Soviet states have purchased few arms from the U.S. to date; most of their purchases since independence have been from Russia.

Democracy & Human Rights

Definition: Border – An imaginary line separating the imaginary rights of one country from the imaginary rights of another.

— Ambrose Bierce, The Devil's Dictionary

The 26 states that make up Petrolistan are, with two notable exceptions, governments with authoritarian rule. The Arabian Peninsula is almost entirely governed by hereditary monarchies. One, Saudi Arabia, can trace its roots back to the 15th century.**(1)** Various parts of Yemen were ruled by sultans and succeeding dynasties of religious imams for centuries until the 1960s when several decades of civil war began.**(2)** Today it is ruled by an autocratic "president."

Most of the former states of the Soviet Union are ruled by dictators that were former leaders or functionaries of the Communist Party. Egypt and Syria are also dictatorships. Pakistan was taken over by a military coup in 1999.

In at least 3 cases dictators have or are preparing to pass their power on to their children. (In Azerbaijan and Syria this has already happened, and the ground is being laid in Kazakhstan.)**(3)**

Afghanistan and Iraq are under military occupation by the U.S., though the prior governments were brutally authoritarian: a theocracy in Afghanistan and a dictatorship in Iraq. Lebanon was occupied by Syria from 1982 until 2005. Originally a self-appointed peace keeping force during Lebanon's civil war, Syria never relaxed its guard until political pressure to leave was overwhelming.**(4)**

The two democracies in the region have a history of conflict with minorities living in or near their borders. Turkey has oppressed its Kurdish minority since its founding in 1923. And Israel has discriminated against Palestinians since its founding, though many Israelis believe their posture is a justified defense to terrorism and ongoing conflict. Still, there is comparative freedom in these states compared to the region as a whole.

Georgia and Djibouti recently changed governments, and although we can hope for the best, these states have no experience with democracy to rely on.

Though it varies from border to border, most of these states deny political opponents the right to participate in the government.**(5)** In some states, there are elections for legislative bodies, but they have no binding authority: their decisions are only advice to the ruler, or can be easily vetoed. In others, the ruler's party or position is guaranteed a healthy percentage of the legislative body. In those theoretical instances where opponents are allowed to compete in elections, polls are rigged to obtain the desired results. In Iran, religious clerics routinely overrule the elected President and Legislature. In many governments in Petrolistan, the opposition is often physically harassed, jailed, tortured, or exiled.

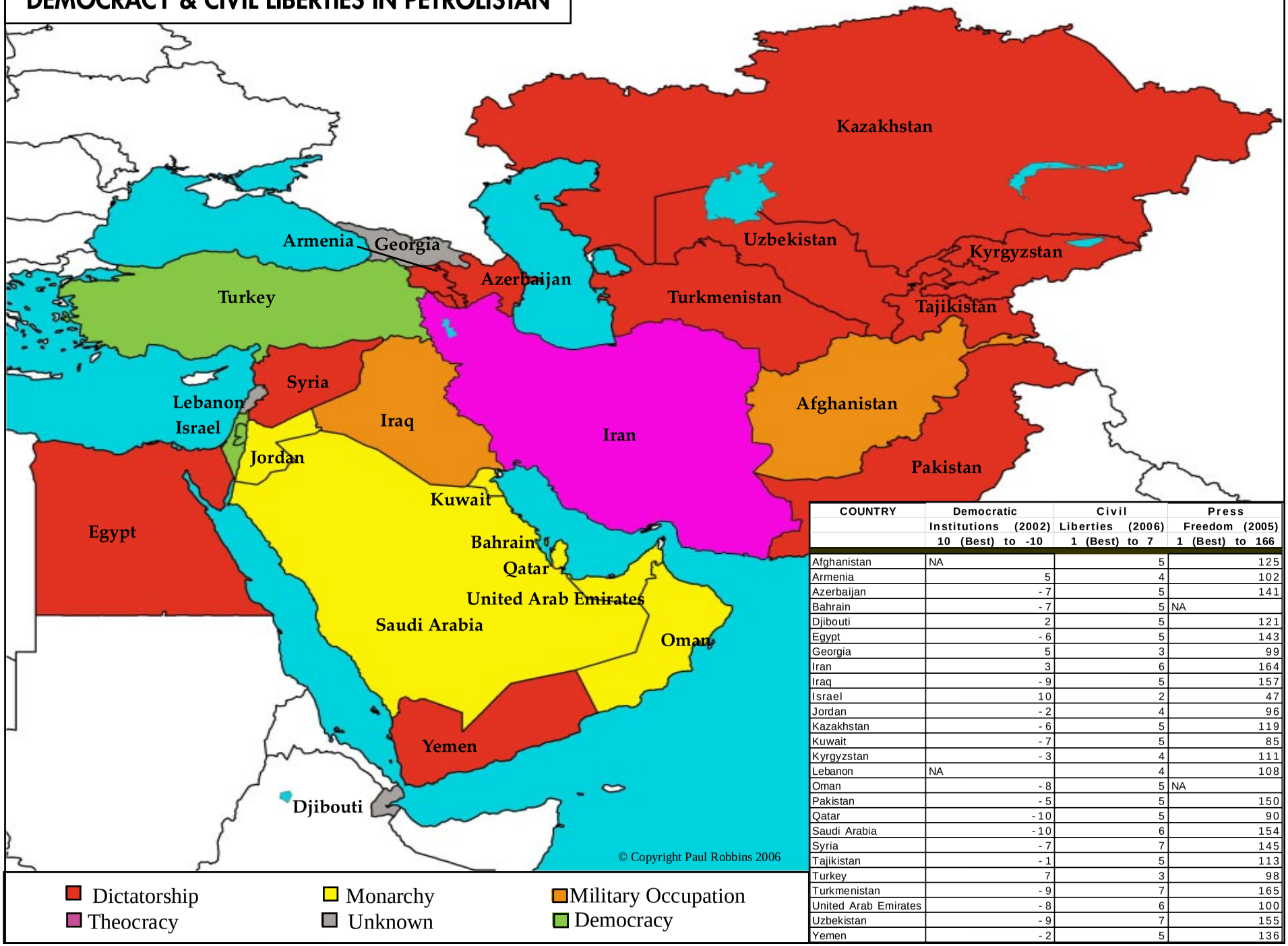
Religious beliefs that differ from the state's view are also oppressed, sometimes with physical attacks, jail, torture, and occasionally execution. Some of this is justified by claims of fighting Muslim extremism. But many times the people and groups in question are avowedly peaceful. Human rights activists are often treated with the same abuse as unaccepted religious groups.

Women's rights are a novelty throughout most of the Arabian Peninsula and Afghanistan. And journalism in most of Petrolistan is a high-risk profession if you disagree with the government, resulting in physical attacks, torture, government lawsuits, vandalism to printing and broadcasting property, and occasionally jail.

A rating of democracy and democratic institutions was created by the Polity IV Project at the University of Maryland.**(6)** In 2002, it rated 155 governments on a scale of +10 to –10 (best to worst). Of the 24 governments rated in Petrolistan, only 6 even have a positive rating (including Israel and Turkey). Two, Lebanon and Afghanistan, could not be rated because they were both under military occupation at the time. Of the states rated, 7 out of the 10 worst are in Petrolistan. The 2 worst governments in the world are also the world's largest oil producers, Qatar and Saudi Arabia.

The organization "Freedom House" rated 192 states for civil rights and liberties in the year 2006.**(7)** They were rated on a 1 to 7 scale, with 1 being "Free," 3 being "Partly Free," and 5.5 being "Not Free." (The U.S. was one of 52 countries with the highest score.) Of the 26 rated in Petrolistan, only one, Israel, rated highly. Fourteen of these states rated at or below the level of "Not Free."

DEMOCRACY & CIVIL LIBERTIES IN PETROLISTAN



COUNTRY	Democratic Institutions (2002) 10 (Best) to -10	Civil Liberties (2006) 1 (Best) to 7	Press Freedom (2005) 1 (Best) to 166
Afghanistan	NA	5	125
Armenia	5	4	102
Azerbaijan	-7	5	141
Bahrain	-7	5	NA
Djibouti	2	5	121
Egypt	-6	5	143
Georgia	5	3	99
Iran	3	6	164
Iraq	-9	5	157
Israel	10	2	47
Jordan	-2	4	96
Kazakhstan	-6	5	119
Kuwait	-7	5	85
Kyrgyzstan	-3	4	111
Lebanon	NA	4	108
Oman	-8	5	NA
Pakistan	-5	5	150
Qatar	-10	5	90
Saudi Arabia	-10	6	154
Syria	-7	7	145
Tajikistan	-1	5	113
Turkey	7	3	98
Turkmenistan	-9	7	165
United Arab Emirates	-8	6	100
Uzbekistan	-9	7	155
Yemen	-2	5	136

A press freedom report in 2005 by the international group "Reporters Without Borders" ranked 167 governments for their tolerance to freedom of information.(8) Of the 24 states in Petrolistan that were rated, only 7 were even in the best 100; 10 were in the bottom quarter. Israel rated the highest at 47th, though its press coverage of the Palestinian conflict is rated near the bottom at 146th. (Interestingly, the highest rated state is Finland. The U.S. rates 44th, though its coverage in Iraq ranked near the bottom at 137.)

Another indicator of oppression is a state's tolerance for human trafficking for purposes of exploited labor or prostitution. The U.S. State Dept. produces an annual report discussing progress or regress with curbing this. The 2005 report lists 4 governments in Petrolistan that rank at the very bottom. They are part of the "Tier 3" list, described as countries whose governments do not fully comply with the minimum standards to combat human trafficking and are not making significant efforts to do so. These include Saudi Arabia, Kuwait, Qatar, and the United Arab Emirates. There are 4 other countries on the "Tier-2 Watch List" that have taken steps to curb these crimes, but has not fully complied with standards that ensure enforcement of human trafficking laws. These include Armenia, Azerbaijan, Bahrain, Uzbekistan.(9)

Not all circumstances that explain freedom are easily put into rating systems, such as human rights abuses. However, Human Rights Watch, the international organization that monitors freedom worldwide, has reported horror stories from most states in the region. Some of the examples are so bizarre as to be surreal.

Equal Suffrage: Saudi Arabia has some of the world's worst restrictions on women. They must wear abayas (veils) and head coverings, are not allowed to drive, must be accompanied by a male member of their family when traveling, and face discrimination in educational training. In its most infamous incident surrounding misogyny, 15 girls were killed by fire in a school when religious police would not allow the building to be evacuated because the girls were not properly clothed in approved attire.(10)

Worker's Paradise: Foreign workers in Saudi Arabia, many in low-wage occupations, are subject to poor working conditions and other abuse (including rape) at the hands of their employers, who typically hold their passports and official residence permits. With these documents essentially confiscated, workers are unable to leave the state unless their employers request an exit visa, which means they become forced labor.(11)

Justice For All: Saudi defendants are sometimes sentenced in secret trials. Sometimes confessions after torture are used as evidence. An observer from Human Rights Watch observed "some resistance on the part of some judges to the presence of lawyers in their courts."(12)

In Iran, thieves can have fingers amputated; bodies of the executed have been hoisted on mobile cranes and driven around the city for display.(13)

In Uzbekistan, there are at least 6,500 political and religious prisoners. Sometimes these prisoners are beaten or tortured. One died from torture after being arrested for possession of a leaflet.(14)

Grassroots Democracy: In Yemen, security forces responded to a vote-counting dispute by opening fire indiscriminately. Local people returned fire, and 6 died in the incident.(15)

In Turkmenistan, six homes of people related to an opposition leader were flattened for reconstruction purposes.(16)

Freedom of Worship: The modern world's perceived lack of morality is also offensive to Iran's religious establishment. In 2002, an actress, who kissed a film director at a film festival was prosecuted for corrupting public morality.(17)

In 2005, Iran and Saudi Arabia received the State Department's lowest honor for tolerance, being 2 of only 8 nations in the world described as a "Country of Particular Concern" in its annual report on religious freedom.(18)

In Yemen, apostasy (disbelief in Islam) is punishable by death.(19)

In Armenia, where religions not sanctioned by the government are frowned upon, the state supported the prosecution of a Jehovah's Witness for depriving 12 children present at his service "of their right freely to practice their national religion and derive benefit from their people's culture."(20)

In Georgia, civilian militants intimidated and attacked non-Orthodox religious faiths with impunity. Sometimes they were incited by Orthodox priests. In one instance, police arrived and stood by while church members were beaten by a mob. In another, religious books were burned.(21)

A Free Press: When a polling organization revealed that the vast majority of Iranians wished to have dialogue with the U.S., the judiciary responded by closing down the institute that conducted the poll and prosecuting the poll's director and the director of the news agency that published it.(22) Attacks against the independent Iranian news media are rampant; 85 newspapers and periodicals were closed between April 2000 and the end of 2001 for challenging religious or political institutions.(23) Some of the journalists associated with these publications were imprisoned.(24)

Corruption and Poverty

Corruption is widespread in many of these states. And this tracks closely with the economy of the region, since many of these states have a very low standard of living and widespread poverty.

A rating of corruption was created by the organization Transparency International. In 2005, it rated 158 governments on a scale of 1 to 10 (worst to best).(1) Of the 25 states rated in Petrolistan, 13 rank at 3 or below. In general, Central Asian states are the most corrupt, with Pakistan, Tajikistan, and Turkmenistan amongst the most sordid in the entire world, ranking in the bottom 16. Saudi Arabia scores 3.4. The only states that distinguish themselves are Israel and the tiny states on the coast of the Arabian Peninsula. (Israel and Oman rate 6.3, compared to the U.S. at 7.6 and Iceland, the world's least corrupt, at 9.7.) But these states have small populations, so the weighted average of corruption in greater Petrolistan is quite low.

And you will notice a distinct correlation between corruption and income. The per capita income for most of these states is quite low. In 2004, the weighted average Gross Domestic Product (GDP) in Petrolistan was only $2,383.(2) By way of comparison, the U.S. has a per capita GDP of almost $40,000. The only state even approaching this is Qatar. A few small oil-producing states on the Arabian Peninsula and Israel have a GDP of about half the U.S. The Arabian Peninsula overall only provides a per capita GDP of $8,285.

And income is, of course, central to quality of life (and death). Infant mortality is generally higher in poorer lands, just as general life expectancy is lower. Of 26 states in Petrolistan, only 9 even rate in the better half of the world countries for infant mortality; 8 Petrolistan states are in the lower quarter.(3) States with low infant mortality include the small wealthy states on the Arabian Peninsula and Israel, and interestingly Lebanon and Jordan, which spend a large share of government funds on health care.

As might be expected, states that have pervasive poverty also have high unemployment. The exceptions are the small oil states on the Arabian Peninsula, and Israel, though again, these represent a small fraction of the total land or population. Kuwait, Qatar, Bahrain, and the UAE all have a high percentage, sometimes the majority, of their populations made up from expatriates drawn by direct or indirect employment in the petroleum industry. Saudi Arabia also has a large non-native population of workers.

Percentage of Expatriates in Population(4)

Bahrain	**34%**
Kuwait	**60%**
Oman	**24%**
Qatar	**52-80%**
Saudi Arabia	**26%**
United Arab Emirates	**80-85%**

This presents a unique set of problems. In the small state of Qatar, as much as 80% of the population is from other countries. This tiny state has a land mass only 5 times the size of Travis County, and a population about equal to Travis County. But it contains 14% of all the natural gas in the world!(5) In a region renowned for armed tension, and perhaps feeling nervous about its outnumbered native population, Qatar has welcomed U.S. military patronage. It has built a $1 billion base at its own expense for U.S. forces that has become CENTCOM's headquarters.(6) Kuwait is also paying for a new base for U.S. troops, with a cost of over $200 million.(7)

Saudi Arabia has even more pronounced contradictions. It has a 20-30% unemployment rate, and while its secretive government will not release poverty figures, visitors to the country report that the numbers are probably high.(8) And while it employs some 7 million expatriates, many of them take low-paying service jobs. Even higher paid foreign technicians earn less than Saudi citizens (which is why companies want to hire them). Despite high unemployment, many Saudi citizens will not take these lower paying jobs because they feel it is beneath their standards or pay scale.

The welfare state employs large numbers of Saudis at non-existent jobs; this requires 2/3 of the annual government budget (recently as much as $28.5 billion for this dole).(9) The government also subsidizes health care, food, education, utilities, and housing, and usually runs a deficit to accomplish all this.(10) But until the recent oil price hikes, it could not keep up with the exploding population: 135% increase between 1981 and 2004. While the per capita GDP was $16,269 in 1981, it fell to $10,202 in 2004.(11) Since the common person's living standard has decreased, the jealousy toward the Royal Family has sparked unrest, sometimes expressed as terrorism.

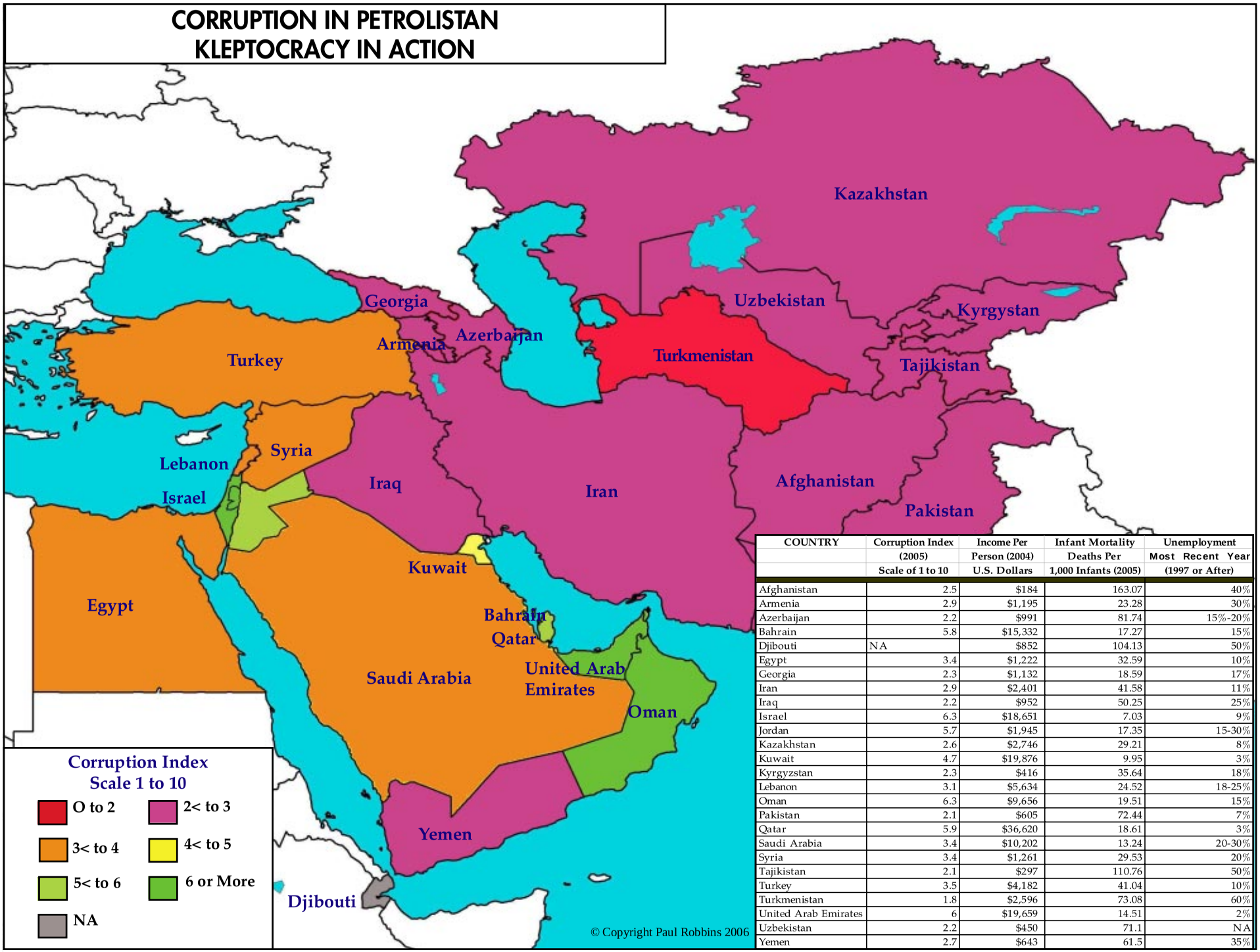
Other Arabian oil states have used some of their wealth to set up welfare states, at least for their own citizens. Kuwait, for instance, gives its citizens free retirement income, marriage bonuses, housing loans, guaranteed employment, free medical services, and free education at all levels. (Though again, the majority of its residents are not citizens).

Israel has a highly industrialized economy that partially relies on exports of manufactured goods and materials. About 2% of its export revenue comes from weapons manufacture.(12) But the rest of Petrolistan fares poorly in industrialization.

The ex-Soviet states in Petrolistan were thrust into independence in 1991 without adequate preparation. Most of these states were gerrymandered to include ethnic minorities that were not fond of their assigned government. So armed conflict often arose when Soviet influence waned. And there were no guaranteed incomes or markets for products. Azerbaijan and Kazakhstan have done better than the rest because they have exploited their oil reserves. But even in these oil states, most of the wealth stays with the elite.

Iraq never economically recovered from the wars and disputes that its dictator got it into with Iran and Kuwait. And Iran's still undiversified economy and enormous population, combined with setbacks from the war with Iraq in the 1980s, have kept it at a low standard of living.

CORRUPTION IN PETROLISTAN
KLEPTOCRACY IN ACTION



COUNTRY	Corruption Index (2005) Scale of 1 to 10	Income Per Person (2004) U.S. Dollars	Infant Mortality Deaths Per 1,000 Infants (2005)	Unemployment Most Recent Year (1997 or After)
Afghanistan	2.5	$184	163.07	40%
Armenia	2.9	$1,195	23.28	30%
Azerbaijan	2.2	$991	81.74	15%-20%
Bahrain	5.8	$15,332	17.27	15%
Djibouti	NA	$852	104.13	50%
Egypt	3.4	$1,222	32.59	10%
Georgia	2.3	$1,132	18.59	17%
Iran	2.9	$2,401	41.58	11%
Iraq	2.2	$952	50.25	25%
Israel	6.3	$18,651	7.03	9%
Jordan	5.7	$1,945	17.35	15-30%
Kazakhstan	2.6	$2,746	29.21	8%
Kuwait	4.7	$19,876	9.95	3%
Kyrgyzstan	2.3	$416	35.64	18%
Lebanon	3.1	$5,634	24.52	18-25%
Oman	6.3	$9,656	19.51	15%
Pakistan	2.1	$605	72.44	7%
Qatar	5.9	$36,620	18.61	3%
Saudi Arabia	3.4	$10,202	13.24	20-30%
Syria	3.4	$1,261	29.53	20%
Tajikistan	2.1	$297	110.76	50%
Turkey	3.5	$4,182	41.04	10%
Turkmenistan	1.8	$2,596	73.08	60%
United Arab Emirates	6	$19,659	14.51	2%
Uzbekistan	2.2	$450	71.1	NA
Yemen	2.7	$643	61.5	35%

So much of this income disparity is due to oil revenues. Petroleum-producing states have more income than their neighbors. And the economy of oil-producing states is generally undiversified. Most of their export earnings come from petroleum-related exports.

Sadly, a main revenue source for states without oil is illegal drugs. Afghanistan supplied 87% of the illicit opium produced in the world in 2005, despite the pronounced presence of U.S. troops.**(13)** If the U.S. occupying force were to crack down on opium production, Afghanistan would probably erupt into another war, as it is the state's only source of export revenue. About 30% of the country's GDP (among the lowest in the world) comes from opium production and smuggling. And the states of Tajikistan, Kyrgyzstan, and Georgia have drug trafficking routes, adding to their already pervasive corruption.

But on the other hand, corruption in these states can be downright colorful and entertaining. Some of these governments have been termed "kleptocracies."

In 2001, it was revealed that $1.4 billion was held by Kazakhstan President, Nursultan Nazarbayev, in Swiss accounts.**(14)** This included money from a drilling concession purchased by oil giant Mobil. When confronted, the President first blamed his prime minister, who fled to exile. When questions persisted about the Swiss accounts, Nazarbayev claimed he withheld the funds to stabilize the state's currency. The Kazakh Parliament then gave him lifelong immunity from prosecution, and legalized money laundering.

A U.S. Dept. of Justice investigation uncovered $120 million in Swiss accounts registered to the President's children and relatives, which were then frozen by the Swiss government.**(15)** Eventually, 2 men associated with American oil company deals to grant drilling concessions to Chevron and Mobil were indicted for corruption related to bribery and kickbacks in the "Kazakhgate" scandal.**(16)**

The government harassed the few journalists who would cover the story.**(17)** Attacks on independent press critical of the government have included beatings, imprisonment and death threats to reporters; lawsuits by the government against publishers; and property damage to offices and presses. In one instance, a reporter's family member was killed. Broadcasters critical of the government have their licenses terminated.

In one outlandish incident, a false version of an opposition newspaper was circulated that discredited its own positions. When the newspaper responded by accusing the government of trickery, they were sued for defamation.**(18)** In another case, paper from the government-owned factory was withheld from a newspaper.**(19)** In still another, a TV station critical of the government had its cables severed by machine guns.**(20)** A Website critical of the government had its access terminated.**(21)**

Petroleum as Percent of Total Export Dollars

Azerbaijan	90%
Bahrain (refining)	60%
Iran	90%
Iraq	90%
Kazakhstan	58%
Kuwait	90%
Qatar	80%
Saudi Arabia	90-95%
Syria	50%
Turkmenistan	57%
United Arab Emirates	45%
Uzbekistan	10%

The oil state of Azerbaijan is also littered with chicanery. Ilham Aliev (son of the President/dictator Heydar Aliev, who died in late 2003) was appointed vice president of the state-owned oil company. An indictment in New York State charges that millions in bribes were given to government officials to privatize the company in the late 1990s.**(22)** An Azeri government investigation discovered 800 businesses involved in illegal schemes with the company.**(23)**

An anti-corruption organization in the region reported that kickback schemes are quite common, with senior state oil company officials owning shell companies that receive orders for overpriced goods and services.**(24)** The state company is managed by President Aliev and his family.

But this is a reflection of the entire country. By one account, literally 60% of the GDP and 51% of employment in Azerbaijan are in the legal or illegal underground economy.**(25)** During a fact finding mission about the BTC pipeline by environmental and human rights groups in 2002, the members were stopped approximately every 30 minutes by a policeman wanting a bribe.**(26)**

And then there is The Kingdom of Saudi Arabia, where corruption is legendary. Members of the Royal Family, who rule the land as an absolute monarchy, frequently take bribes to award government contracts. These procurements can be weapons, infrastructure such as roads or hospital construction, and the building or rebuilding of religious shrines. The power of the Royals is so strong that they can take property from an individual or business without adequate compensation, thus making great profit off eminent domain seizures.**(27)**

All this is in addition to the monthly stipends for members of the Royal Family, who receive direct payments from the state's oil wealth. While these generally range from $19-270,000 a month, several senior princes take as much as $100 million a year.**(28)** Polygamy is the custom, and estimates of the Royal Familyare as high as 12,000.**(29)**

Resource Use
Like Lemmings

The environment in Petrolistan is under stress for a number of reasons. But the largest one by far is no different from most other regions in the world – population. It is poetic irony that in a land that provides the world with a large share of nonrenewable resources, Petrolistan has its own path to nonsustainability. The population of the region already surpasses 603 million people. But at its present growth rate, the region will grow nearly 40% in the next 20 years to 844 million.**(1)**

Only 3 states, Armenia, Georgia, and Kazakhstan, have slightly negative growth rates, with Azerbaijan near zero population growth.**(2)** Meanwhile, others, both rich and poor, are breeding like lemmings. Afghanistan's population is growing at over 3% a year, with Mid-East states like Kuwait and Saudi Arabia at over 2% a year.**(3)**

The worst resource problem this region has is a shortage of water. Petrolistan is one of the two most water-scarce regions of the world (the other is Saharan North Africa). The Center for Environmental Systems Research has rated 140 of the world's states for their water stress level. Of the 20 in the region that have been analyzed, 7 out of the 10 most water-stressed states on the globe are in Petrolistan; 17 out of the world's 25 worst states are also in the region.**(4)**

While water scarcity will have implications for domestic uses and industry, the largest consequences are in agriculture. Most of the petroleum exporting states are grain importing states. Of the major petroleum producing states, only Kazakhstan is a major grain exporter, with some of the others being self-sufficient. But the Arabian states and Iran are major grain importers, and this will only get worse as population soars and water becomes scarcer.

This is despite the astounding progress in agricultural yields. Saudi Arabia, for instance, increased its grain yield per acre an astounding 366% and its grain acreage by 59% in the period between 1980 and 2001.**(5)** It did this through the use of modern techniques: fertilizers were increased 354% per acre; tractor use was increased 170% per acre; and irrigated acreage was increased 59%.**(6)** But for all this effort, the state still imports 65% of its grain.**(7)** And this does not even consider that, long term, this situation is unsustainable because the use of limited groundwater and salt buildup from irrigation renders farmland unproductive. And running irrigation pumps, tractors, and manufacturing fertilizers is also more energy intensive and expensive.

It should be noted that the world's grain supply per capita is shrinking. At the same time, many irrigated areas in Petrolistan that are self-sufficient are becoming saturated with salt, diminishing or eliminating the land's capacity to grow food. And part of the way that Central Asia has been able to maintain its agricultural capacity is the destruction of the Aral Sea.

The Aral was once the 4th largest inland water body in the world. (It is now the 9th largest.)**(8)** It received its water from two main rivers. In the 1960s, the former USSR had the grand notion to divert these rivers to gigantic irrigation efforts in Kazakhstan, Turkmenistan, and Uzbekistan. About 60% of the irrigated land was used for cotton, with much of the rest for food crops.

But the diversion of river water was a monumental blunder. The Sea eventually shrank to 20% of its former volume. Fishing was ruined, and communities around the shore died as shores receded. Air quality became miserable because of airborne dust, salt, and chemical pesticides from agricultural runoff. Because of poverty and lack of medical care, tuberculosis has become rampant. And salt infected the irrigated land.**(9)** The Aral project has been called one of the worst ecological disasters in human history.

Petrolistan - The Sequel

This article has described the land where the world gets a major share of its energy. If you find this bone chilling, then you might wonder what the end game is. While no one can exactly predict the future, some things seem probable.

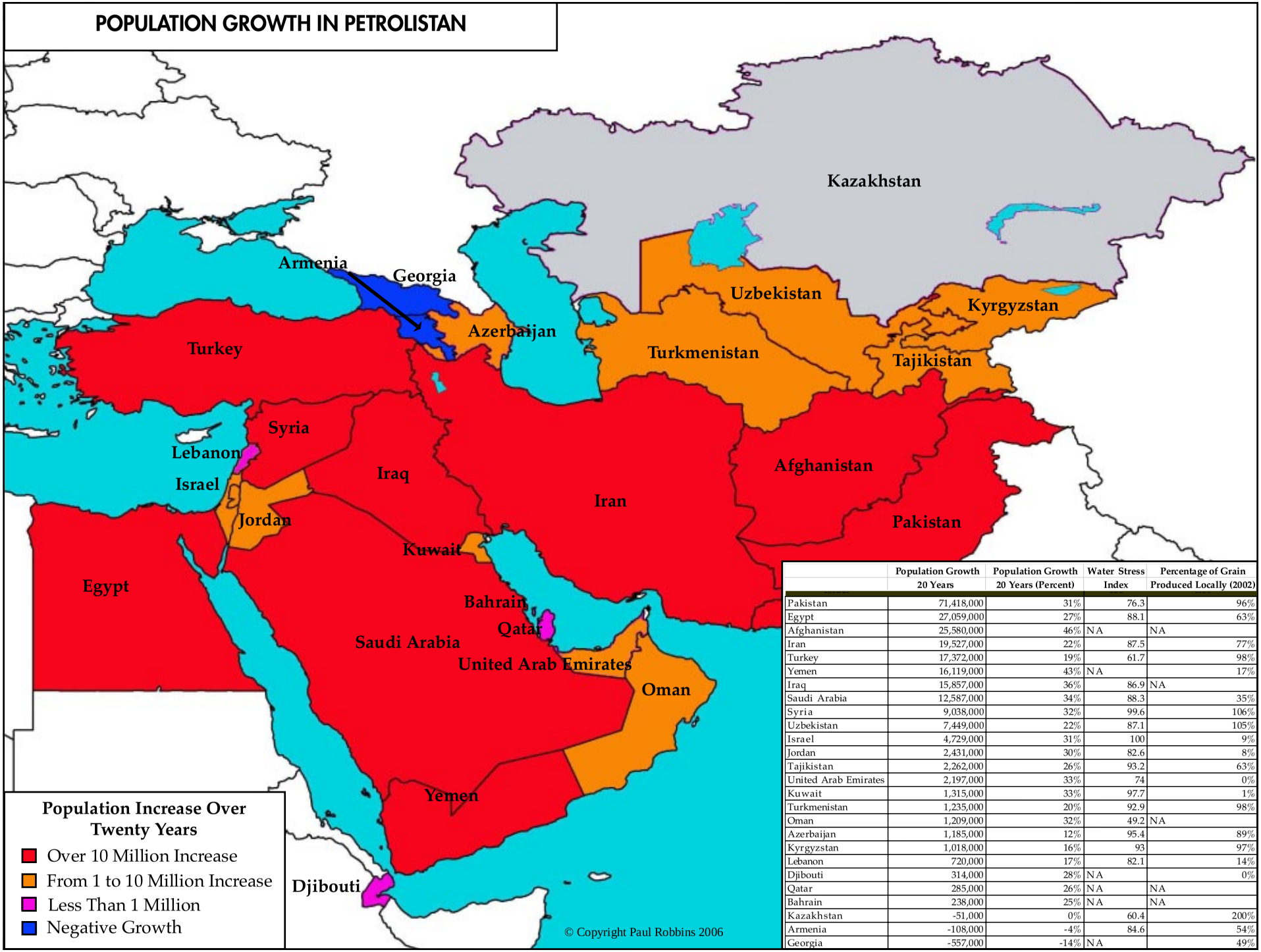
Continued Military Presence in Petrolistan - If the harbingers of doom are right that oil production is about to peak, we will be fighting over an ever-diminishing share – a scenario that environmental writer Richard Heinberg calls "the last man standing." The possibility that the U.S. will expand its military presence in the Mid-East and Caspian states is quite real.

I have no inside information about what the U.S. will ultimately do concerning Iraq. Given the overstated reserves by Saudi Arabia and others, Iraq may be the largest single oil state left in the world. (It might supply all U.S. consumption of oil for 15 years.)**(1)** But U.S. presence is almost certain to provoke continued militant resistance, both inside and outside its borders. The resentment against a Western presence in the Mid-East has to some degree existed since the Crusades. But in the unlikely event that opposition forces are subdued, it is probable that the U.S. will continue to maintain bases in Iraq. Bases will certainly be kept in the Petrolistan region.

U.S. Military Presence In Other Oil States – As the world's supplies get tighter, it should not be surprising to see U.S. military presence in most of the territories from which it imports oil. There are other underdeveloped states around the world with substantial amounts of oil, but their instability and poverty rival Petrolistan. And increased U.S. military presence is not only likely, but already occurring. The two other areas that are receiving the most attention are West Africa and South America.

Nigeria provides the U.S. with 8% of its oil imports. But the state is torn by civil and ethnic strife. Organized gangs

POPULATION GROWTH IN PETROLISTAN



	Population Growth 20 Years	Population Growth 20 Years (Percent)	Water Stress Index	Percentage of Grain Produced Locally (2002)
Pakistan	71,418,000	31%	76.3	96%
Egypt	27,059,000	27%	88.1	63%
Afghanistan	25,580,000	46%	NA	NA
Iran	19,527,000	22%	87.5	77%
Turkey	17,372,000	19%	61.7	98%
Yemen	16,119,000	43%	NA	17%
Iraq	15,857,000	36%	86.9	NA
Saudi Arabia	12,587,000	34%	88.3	35%
Syria	9,038,000	32%	99.6	106%
Uzbekistan	7,449,000	22%	87.1	105%
Israel	4,729,000	31%	100	9%
Jordan	2,431,000	30%	82.6	8%
Tajikistan	2,262,000	26%	93.2	63%
United Arab Emirates	2,197,000	33%	74	0%
Kuwait	1,315,000	33%	97.7	1%
Turkmenistan	1,235,000	20%	92.9	98%
Oman	1,209,000	32%	49.2	NA
Azerbaijan	1,185,000	12%	95.4	89%
Kyrgyzstan	1,018,000	16%	93	97%
Lebanon	720,000	17%	82.1	14%
Djibouti	314,000	28%	NA	0%
Qatar	285,000	26%	NA	NA
Bahrain	238,000	25%	NA	NA
Kazakhstan	-51,000	0%	60.4	200%
Armenia	-108,000	-4%	84.6	54%
Georgia	-557,000	-14%	NA	49%

steal an estimated 11-27% of Nigeria's 2.5 million barrel per day production.(2) Fighting among ethnic groups has become acute, exacerbated by rivalries over oil wealth. This has created ongoing gun battles between government troops and armed factions, causing deaths to civilians as well as combatants.(3)

Oil company personnel have been kidnapped for ransom or killed. Sabotage to pipelines, wells, and pumping stations is so acute that companies are losing billions of dollars in property damage and production revenues. The situation is so dire that oil companies now prefer to drill more expensive wells offshore than on land because they are less vulnerable to attack.

In the summer of 2004, the U.S.S. Harry Truman Battle Group (12 ships and submarines and 8 squadrons of aircraft) participated in a military exercise dubbed "Operation Summer Pulse" in the Gulf of Guinea on the West African coast.(4) The exercise involved coordination with all branches of the U.S. military as well as NATO forces.

Janes Defense Weekly reported in early 2004 that America has offered to strengthen Nigeria's coastal defenses, but in return, it is asking for base sites for training and operations in event of a crisis.(5) It should be noted that unstable conditions are also apparent in oil states close to Nigeria, such as Angola and Equatorial Guinea.

South America is also a major oil producing region with political instability that is most typified in Columbia. Anti-government armies, right-wing paramilitaries, government forces, and drug rings have combined in a deadly mix in the country's oil producing regions.(6) Between 1999 and 2004, Columbia's oil production dropped a third, in part because of guerilla attacks on oil infrastructure, and the danger involved in drilling new wells to make up for depletion of old fields.(7)

In the past, U.S. monetary and military assistance has been given for the war on drugs. But anti-government forces have long extorted money from oil companies, and this has led the U.S. to provide military training and assistance to thwart these groups under the guise of fighting terrorism. Human rights groups critical of the effect this is having on the citizens of the area have estimated the money to defend at-risk oil fields amounts to a subsidy of $3 per barrel.(8)

Destabilized Oil States – The poor in many states in Petrolistan are subject to the influence of political and religious leaders who resent the U.S. And the populations in almost all of Petrolistan are exploding, exacerbating this poverty. Destabilizing violence is apparent in many Petrolistan states. Internal terrorism exists in Saudi Arabia and Uzbekistan. Insurgencies fester in U.S.-occupied Iraq and Afghanistan. Pakistan, Saudi Arabia, and the United Arab Emirates were the only governments in the world to recognize the Taliban theocracy in Afghanistan. And ethnic conflicts and uneasy truces exist in several Caspian states.

Rising oil prices may mitigate this to a degree in oil states, but only if kleptocracies that rule them decide to use more of the wealth to create employment and alleviate the poverty. Historically, there are precedents for this in some of them (e.g., Saudi Arabia), but since the situation has festered out of control this long, there is no reason to think increased social spending will happen quickly.

Iran is the perfect bad example of what can happen when an oil state loses its tolerance for the U.S. The Iranian Revolution in 1979 didn't just hold American embassy officials hostage, it held its oil hostage. The shocks from withdrawing Iranian petroleum from the world market in 1979 sent oil to its highest real dollar price in history. And a quarter of a century later, relations between the two governments are still hostile. It's hard to say who is the bigger loser. Iran does not have access to U.S. drilling technology and capital because of a trade embargo, something it needs to increase its standard of living. But the U.S. is deprived of Iran's oil and natural gas, which could help America's economy. And its economic competitors such as China and Europe receive the oil instead.

In this incredibly tight market, all that would be needed to send oil spiraling to all-time highs is for one major oil state to be taken over by an unfriendly or incompetent government. And even if an occupying military force were employed, there is only so much it can do to stifle terrorism – witness the sabotage on Iraq's oil infrastructure since the invasion in 2003.

Food Wars – Another possibility that might occur in the sequel is food embargoes. Most of Petrolistan's oil exporting states are food importing states. Conversely, many oil importing countries export large amounts of food. The U.S. is the world's agricultural superpower, providing 27% of all the world's exported grain in 2002.(9) Petrolistan states, particularly in the Mid-East, have large grain imports. Food production in the Caspian is more self sufficient, in part because of the draining of the Aral Sea. Also, the widespread poverty in many of these lands means that many people simply do not eat enough.

In theory, if America withheld its grain from the world, the world would not starve. But like oil, grain supplies are incredibly tight. If the U.S. kept its entire supply off the market, grain costs would soar. It would increase the cost of living in grain purchasing states. The U.S. would not dare order its farmers not to grow or sell crops, but even if it were to buy the entire export crop at full market value, grain embargoes would be a bargain compared to the cost of a military occupation. (Buying the U.S. export crop at 2002 prices would cost $4-7 billion, compared to $73 billion a year for the occupation of Iraq.)(10)

In practice, the scope would be more limited. For instance, the U.S. targeted Cuba with a food embargo in 1993. Not only were U.S. companies forbidden to sell food to Cuba (punishable by jail), but foreign companies doing business with the U.S. were also prohibited from Cuban transactions. If a foreign company broke the law, they

could not do business with the U.S. Cuba's food situation was dire for several years. At one point, some estimate the average person lost 20 pounds.(11) Since Cuba lost access to many of its agricultural inputs like fertilizers and pesticides from the former Soviet Union, it compensated with a number of successful strategies to foster urban food cultivation and organic agriculture. But the population has never gone back to its original diet.

If food embargoes were targeted at the Mid-East, it is unlikely the oil states could compensate without major food subsidies to the general public. Kuwait, for instance, is entirely dependent on expensive, desalinated water for its domestic use, and most of its land is covered in desert, military bases, or both; it could not grow any substantial amount of food under any circumstances. Saudi Arabia has some limited ground water resources, but these do not replenish quickly and are not long-term options. Since it takes several pounds of grain to produce 1 pound of animal food, cutbacks in grain-fed meat are likely. But this might provoke resentment from a public accustomed to such food.

This strategy of food embargoes is patently inhumane. But in war, there are harsher weapons, and this is one that may be used.

Alternative Energy Sources – Our government does not have the collective will to invoke forceful conservation measures, even cost effective ones that do not diminish standards of comfort. And federal research and development for renewable energy is a trickle of what it needs to be.

In relative terms, renewable energy development would take a small amount of money, particularly when contrasted to the tens of billions of dollars the federal government annually awards for tax subsidies to the energy industry or military support necessary to guard oil. But the political clout of the conventional energy industry and its industrial allies (such as the auto industry), combined with cultural prejudice of many in government, have thwarted aggressive development of renewable energy. Wind power and small biomass projects are encouraged to a minimal degree because they are close to competing with conventional fuels. But other technologies like concentrating solar power and photovoltaics limp along at minimal development levels because they lack funding.

Even minimal energy efficiency measures are often opposed by the government. In 2002, a bill that would raise automotive fuel efficiency for passenger cars by 31% by 2015 was voted down in the U.S. Senate by a 2 to 1 margin.(12) A federal rule mandating a scant 8% increase in residential air conditioning efficiency had to be enforced by a court.(13)

So what is the country's alternative if environmental solutions are rejected by its decision makers? *More of the same.* They will try to revamp the infrastructure for fossil fuels, electric generation, and nuclear power, while protecting U.S. imported energy with military force. And this will be used to fuel an ever-growing fleet of cars, buildings, and machines.

The next chapter will discuss one of these new strategies, the increasing use of imported Liquefied Natural Gas. It has serious financial costs and environmental effects. And there are national security implications as well. But these are clever lemmings we have here, and they will do anything they can to prolong their lifestyle.

Anything but the right thing.

FOOTNOTES

Introduction

1 LeBlanc, Steven A., *Constant Battles* (New York, NY: St. Martin's Press, 2003), Chapter 4.

The World's Service Station

1 Derived from U.S. Central Intelligence Agency, *CIA World Factbook*, Washington, D.C., 2004. Online at www.cia.gov/cia/publications/factbook/

2 British Petroleum, "Oil – Proved Reserves" and "Gas – Proved Reserves," *Statistical Review of World Energy 2005.* Online at www.bp.com/genericsection.do?categoryId=92&contentId=7005893

3 U.S. Department of Energy, Energy Information Administration (Hereafter this will be referred to as DoE, EIA), *Historical Data Overview*, "Table 5.1 Petroleum Overview, 1949-2004" and "Table 5.4 Petroleum Imports by Country of Origin, 1960-2004," (Hereafter assumed published from Washington, D.C.), 2005. Online at www.eia.doe.gov/emeu/aer/petro.html

4 British Petroleum's *Statistical Review of World Energy 2005*, "Oil Production – Barrels" and "Gas Production – bcf."

5 Ibid., "Oil – Proved Reserves."

6 Yergin, Daniel, *The Prize* (New York, NY: Simon & Schuster, 1991), p. 57.

7 Ibid., "Germany's Formula for War," pp. 305-327.

8 Derived from DoE, EIA,"Caspian Sea Region: Key Oil and Gas Statistics," August 2003. Online at www.eia.doe.gov/emeu/cabs/caspstats.html

9 "New Caspian Oil Likely to Cushion Market, nothing more," *Associated Press/Forbes*, February 15, 2005.

New Imported Fuels

1 DoE, EIA, *Historical Data Overview*, "Table 6.1 Natural

Gas Overview, 1949-2004" and "6.3 Natural Gas Imports, Exports, and Net Imports, 1949-2004," 2004. Online at http://www.eia.doe.gov/emeu/aer/natgas.html

2 Ibid., Table 6.3.

3 Derived from British Petroleum's *Statistical Review of World Energy 2005,* "Gas – Trade movements LNG" and "Gas Consumption – bcm." Online at www.bp.com/genericsection.do?categoryId=92&contentId=7005893

4 DoE, EIA, "Forecast Comparisons," *International Energy Outlook 2006*, Report #:DOE/EIA-0383(2006), February 2006, p. 112 and Footnote 1, Table 6.1.

5 DoE, EIA, *International Energy Outlook 2005*, July 2005. Online at http://www.eia.doe.gov/oiaf/ieo/special_topics.html

6 DoE, EIA, *Country Analysis Briefs*, "Saudi Arabia" December 2003. Online at www.eia.doe.gov/emeu/cabs/saudi.html

7 Huang, Wen, "U.S. Increasingly Imports Nitrogen and Potash Fertilizer, *Amber Waves*, U.S. Dept. of Agriculture, Economic Research Service, Washington, D.C., February 2004. Online at www.ers.usda.gov/amberwaves/February04/Findings/USIncreasinglyImports.htm

8 Bureau of Labor Statistics employment database: http://data.bls.gov/PDQ/outside.jsp?survey=ce

9 Footnote 3, The World's Service Station and U.S. Dept. of the Interior, Bureau of Mines, *Mineral Yearbook*, 1946-1949 (Washington, D.C.: U.S. GPO, 1948-1952).

Oil End Use Chart

Percent of Auto fuel from:
Total oil end use from DoE, EIA, *Annual Energy Review*, August 15, 2005, Tables 1.3, 5.14a.b and c. Data for 2004. Online at www.eia.doe.gov/emeu/aer/
Transportation sector end use from Davis, Stacy, and Susan Diegel, *Transportation Energy Data Book,* U.S. Dept. of Energy, Oak Ridge, TN (Oak Ridge, TN: Oak Ridge National Laboratory, December 2004), p. 2-1. Data for 2002. Online at cta.ornl.gov/data/tedb24/Edition24_Chapter02.pdf

Historical Chart - The Oil We Bleed

1 United Nations Statistics Division, "Table 14, Production, trade and consumption of crude petroleum," (1950-2001), United Nations, New York, NY, July 18, 2004.

2 Footnote 9, New Imported Fuels, U.S. Dept. of the Interior.

3 DoE, EIA, *Historical Data Overview*, "Table 5.4 Petroleum Imports by Country of Origin, 1960-2004," 2004. Online at www.eia.doe.gov/emeu/aer/petro.html

4 Little, Douglas, "1949-1958, Syria: Early Experiments in Covert Action," *Press for Conversion!*, Issue # 51, May 2003. Online at coat.ncf.ca/our_magazine/ links/issue51/articles/51_12-13.pdf

Klare, Michael T., *Resource Wars* (New York, NY: Henry Holt and Company, LLC, 2001), Chapters 2-5, pp. 27-137.

Yergin, Daniel, *The Prize,* (New York, NY: Simon & Schuster, 1991), Parts IV and V, pp. 389-745.

A Dangerous World

1 Azerbaijan: "USA plans to expand military presence in Azerbaijan close to Iran," *Alexander's Gas and Oil Connections*, April 13, 2005. Online at http://www.gasandoil.com/goc/news/ntm51989.htm

Kazakhstan: Johnson, Chalmers, *Sorrows of Empire* (New York, NY: Metropolitan Books, 2004), p. 184.

Georgia: Antelava, Natalia US military will stay in Georgia," *BBC News*, January 18, 2004. Online at http://news.bbc.co.uk/2/hi/europe/3406941.stm

Svetlova, Ksenia, "US seeks Georgian help for Iran strike," Jerusalem Post, Feb 20, 2006. Online at www.whtt.org/index.php?news=2&id=726

2 Agence France-Presse, "Rumsfeld, Kazakh government hold talk on protecting Caspian oil fields," Feb 25, 2004.

Klare, Michael T., *Blood and Oil* (New York, NY: Metropolitan Books, 2004), p. 136-9.

Leupp, Gary, "Train and Equip" for What? Georgia and the "War on Terrorism," *Counterpunch*, May 29, 2002.

Global Security.org, Alexandria, VA, U.S. Central Command Facilities, 2004/5. Online at www.globalsecurity.org/military/facility/centcom.htm

3 DoE, EIA, "Persian Gulf Oil and Gas Exports Fact Sheet," *Country Analysis Briefs*, September 8, 2004. Online at www.eia.doe.gov/emeu/cabs/pgulf.html

Percentage derived from comparing statistics in Footnote 1, Historical Chart.

4 Klare, Michael T., *Resource Wars,* op. cit., p. 92-4.

Toktogulov, Kadyr, "Russian base in Kyrgyzstan to serve security alliance of ex-Soviet republics," *Associated Press*, November 20, 2003.

5 Broad, William, et.al "Inquiry Suggests Pakistanis Sold Nuclear Secrets," *New York Times*, December 22, 2003.

6 Broad, William, et.al., "A Tale of Nuclear Proliferation: How Pakistani Built His Network," *New York Times*, February 12, 2004.

7 Milhollin, Gary and Kelly Motz, "Nukes 'R Us," *New York Times*, Op-Ed, March 4, 2004. Online at www.nytimes.com/2004/03/04/opinion/04MILH.html?ex=1079467432&ei=1&en=9f01229c4063c9d8

8 Nordland, Rod, "The Bombs in the Basement," *Newsweek*, July 11, 1988, p 42.

9 Global Security.org, "Saudi Arabian Special Weapons," Alexandria, VA, 2006. Online at www.globalsecurity.org/wmd/world/saudi/index.html

10 Ibid.

11 Ibid.

Map of Bases

Most base locations from Global Security.org, Alexandria, VA, *U.S. Central Command Facilities*, 2004/5. Online at www.globalsecurity.org/military/facility/centcom.htm

Iranian bases from Jaffee Center for Strategic Studies, "Iran," *The Military Balance*, (Tel-Aviv, Israel: Jaffee Center for Strategic Studies, August 30, 2004). Online at http://www.tau.ac.il/jcss/balance/Iran.pdf

Footnotes 5-11, A Dangerous World.

It Came in Waves

1 "Manama [Juffair], Bahrain ," Global Security.org, Alexandria, VA, 2006. Online at www.globalsecurity.org/military/facility/manama.htm

2 Global Security.org, "Royal Saudi Air Force," Alexandria, VA, 2006. Online at www.globalsecurity.org/military/world/gulf/rsaf.htm

3 Footnote 2, A Dangerous World, Klare, p. 40.

4 U. S. Overseas Loans & Grants [Greenbook] yearly reports adjusted by inflation factors from Bureau of Economic Analysis at the Dept. of Commerce. Online at http://qesdb.usaid.gov/gbk/index.html

5 Footnote 2, A Dangerous World, Klare, p. 44.

6 Ibid., p. 42.

7 "Iran Military Guide, Introduction," Global Security.org, Alexandria, VA, 2006. Online at www.globalsecurity.org/military/world/iran/intro.htm

8 Military assistance from footnote 4.

Weapons sales from Defense Security Cooperation Agency, Open records fulfillment related to *Foreign Military Sales, Foreign Military Construction Sales, and Military Assistance Facts from 1950-2002*, August 12, 2004.

9 Klare, Michael T., *Resource Wars*, op. cit., p. 59-60.

10 Weapons sales from footnote 8.

11 Footnote 5.

12 Footnote 3, p. 46-7.

13 Cordesman, Anthony and Abraham R. Wagner, *The Lessons of Modern War* (Washington, D.C.: Center for Strategic and International Studies, 2006) , Volume II, Chapter 9. Online at www.csis.org/media/csis/pubs/9005lessonsiraniraqii-chap09.pdf

14 Global Security.org, Alexandria, VA, U.S. Central Command Facilities, 2004/5. Online at www.globalsecurity.org/military/facility/centcom.htm

15 Johnson, Chalmers, *Sorrows of Empire*, op. cit., pp. 158-9.

16 Footnote 14.

17 Footnote 9, p. 64.

18 Gilmore, Gerry, "U.S. Troop Levels in Afghanistan Slated to Drop Next Year," *American Forces Press Service*, Dec. 20, 2005. Online at http://www.defenselink.mil/news/Dec2005/20051220_3710.html

19 See footnotes for "Map of Bases."

20 Footnote 1, A Dangerous World.

21 "Active Duty Military Personnel by Service by Region/Country, Total DoD," *Military Personnel Statistics* (Washington, D.C.: Dept. of Defense, Directorate for Information Operations and Reports, December 31, 2005), Online at http://web1.whs.osd.mil/mmid/military/miltop.htm

22 Gerstenzang, James, "Bush Says U.S. in Iraq for Long Haul," *Los Angeles Times*, March 22, 2006. Online at www.latimes.com/news/nationworld/world/la-fg-bush22mar22,0,6003163.story?coll=la-story-footer

23 Footnote 21.

24 Prados, Alfred, *Saudi Arabia: Current Issues and U.S. Relations*, CRS Issue Brief for Congress, Order Code IB93113, Congressional Research Service (Washington, D.C.: Congressional Research Service, Updated February 24, 2006),

p. 10. Online at fpc.state.gov/documents/organization/62644.pdf

Half the Fun Is Getting There

1 Office of Pipeline Safety, Pipeline and Hazardous Materials Safety Administration, *Pipeline Statistics*, Washington, D.C., March 15, 2006. Yearly dollar figures adjusted by the CPI. Online at http://ops.dot.gov/stats/stats.htm

2 Ibid.

3 *Iraq Pipeline Watch* , Institute for the Analysis of Global Security, Washington D.C., March 15, 2006. Online at http://www.iags.org/iraqpipelinewatch.htm

4 DoE, EIA, Caspian Sea Region Country Analysis Brief , *Country Analysis Briefs*, July 2002, Table 4. Online at www.eia.doe.gov/emeu/cabs/caspgrph.html

5 Ibid.

6 Ibid.

7 Ibid.

8 Klare, Michael, *Blood and Oil*, op. cit., pp. 130-1.

9 Ibid., p. 136.

10 Klare, Resource Wars, op. cit, p. 102.

11 Ibid.

12 Lund, Maj. Jannich (United Nations Observer Mission in Georgia), "Patrolling the Ceasefire Line," *United Nations Peace Operations in 2001*. Online at www.un.org/Depts/dpko/dpko/pub/year_review01/Europe_countries/Georgia.htm

13 "Conflict, militarisation, human rights and the Baku-Tbilisi-Ceyhan pipeline, Baku Ceyhan Campaign Web site, Oxford, U.K., last updated 2005. Online at www.bakuceyhan.org.uk/more_info/humanrights.htm

Global Security.org, "Kurdistan – Military," Alexandria, VA, *U.S. Central Command Facilities*, 2004/5. Online at www.globalsecurity.org/military/world/war/kurdistan-turkey.htm

14 Ibid., "Conflict."

15 "PKK militants attack oil pipeline in south-eastern Turkey,"*Alexander's Gas & Oil Connections*, October 27, 2004. Online at http://www.gasandoil.com/goc/news/nte44561.htm

16 Johnson, Chalmers, *Sorrows of Empire*, op. cit., p. 178.

17 Ibid.

18 Percentage of world oil derived from DoE, EIA, "World Oil Transit Chokepoints," *Country Analysis Briefs*, April 2004, p. 8 (Online at www.eia.doe.gov/emeu/cabs/choke.pdf) and Footnote 3, The World's Service Station.

Percentage of net exports derived from "World Oil Transit Chokepoints," and Footnote 1, Historical Chart.

19 Footnote 13, It Came in Waves.

Map of Transportation

Footnote 3, Half the Fun is Getting There.

Footnote 2, The World's Service Station.

Footnote 14, Corruption and Poverty.

DoE, EIA, "World Oil Transit Chokepoints," *Country Analysis Briefs*, April 2004, p. 8 (online at www.eia.doe.gov/emeu/cabs/choke.pdf) and Footnote 3, The World's Service Station.

World Bank, Map Design Unit, *Conflicts in ECA Region* (map) (Kobe City, Japan: United Nations, ReliefWeb, Office for the Coordination of Humanitarian Affairs, April 9, 2001).
Online at http://www.reliefweb.int/rw/RWB.NSF/db900SID/SKAR-64GEN7?OpenDocument

20 DoE, EIA, "World Oil Transit Chokepoints," op. cit., p. 10.

The Price of Freedom

1 Studies and years from Footnote in Oil End Use Chart, Davis, Table 1.8. These were adjusted to 2005 dollars using the CPI.
Costs of Gulf War from Hammond, Grant, "Myths of the Gulf War," *Airpower Journal*, Vol. 12, Issue 3, Fall 98, p. 6 and Watson, Russell, and John Barry, "But What About the Next Time," *Newsweek*, Vol. 124, Issue 17, October 24, 1994, p. 28.
Costs of Operation Iraqi Freedom from Belasco, Amy, *The Cost of Iraq, Afghanistan and Enhanced Base Security Since 9/11*, Order Code RL33110, Congressional Research Service, Washington, D.C, October 7, 2005, Table 3, p. 10. These costs were modified by the CPI and averaged over 3 years. Online at www.fas.org/sgp/crs/natsec/RL33110.pdf

2 Import percentage and quantity from Footnote 3, the World's Service Station.

3 DoE, EIA, *Historical Data Overview*, op. cit., "Table 5.19 Landed Costs of Crude Oil Imports From Selected Countries, 1973-2004."

4 DoE, EIA, "U.S. Crude Oil Wellhead Acquisition Price by First Purchasers," *Petroleum, U.S. Data*. Online at http://tonto.eia.doe.gov/dnav/pet/hist/f000000__3m.htm

5 Barrels divided by 42 gallons and multiplied by 0.813 to compensate for manufacturing losses. This compensation factor was derived from U.S. Dept. of Transportation, Federal Highway Administration, *U.S. Highways Statistics 2004* (Washington, D.C.: U.S. Dept. of Transportation, 2005), Section 1, Table MF21. Online at http://www.fhwa.dot.gov/policy/ohim/hs04/index.htm It reflects the ratio of diesel to gasoline in motor fuel.

Diesel process loss is 0.843; gasoline loss is 0.805. From Groschen, Ralph, *Energy Balance/Life Cycle Inventory for Ethanol, Biodiesel and Petroleum Fuels* (Minneapolis, MN: Minnesota Dept. of Agriculture, Agricultural Marketing Services Division). Online at http://www.mda.state.mn.us/ethanol/balance.html

Miles per gallon and gallons per vehicle from Oil End Use Chart, Davis, Table 2.11. Data for 2002. Online at cta.ornl.gov/data/tedb24/Edition24_Chapter02.pdf

6 Flavin, Christopher, "Creating a Sustainable Energy Future," in Brown, Lester, et al., *State of the World 1988* (New York, NY: W. W. Norton & Company), 1988, p. 27.

7 Footnote 1, Watson.

8 Kemper, Vicki, "Counting the Dead," *Common Cause Magazine*, Apr.-June 92, Vol. 18, Issue 2, p. 6.

9 Williams, Thomas, "Debate Rages on War Illnesses," *The Hartford Courant*, April 17, 2000, p. A1.

10 Footnote 1, Belasco.

11 From Iraq Coalition Casualty Count. Online at http://icasualties.org/oif/

12 From Iraq Body Count Web site, a compilation of news reports. (Updated March 23, 2006.) Online at www.iraqbodycount.org/

13 U.S. cost from sources above. Cost for world derived by using production figures from British Petroleum, op. cit., "Oil Production – barrels."

14 Footnote 1, Belasco.

15 Copulos, Milton, *America's Achilles Heel, The Hidden Cost of Imported Oil* (Washington, D.S.: National Defense Council Foundation, September 25, 2003), p. 6 and Footnote 3, The World's Service Station.

16 Ibid., Chapter 3, and Footnote 3, The World's Service Station.

Cost for U.S. Military and Economic Aid

1 Unless noted, all figures for this analysis are derived from Footnote 4, It Came in Waves.

2 "NATO: the first five years 1949-1954," *NATO Archives*, Updated: 15-Mar-2001, Chapters 1-2. Online at www.nato.int/archives/1st5years/index.htm

3 Klare, Michael T., Blood and Oil, op. cit., pp. 45-6.

4 "Spider's Web: The Secret History of How the White House Illegally Armed Iraq," *Democracy Now* (radio transcript), December 17th, 2003. Online at www.democracynow.org/article.pl?sid=03/12/17/1615235

Costs to Petrolistan States

1 U.S. Central Intelligence Agency, "Military expenditures – percent of GDP," *CIA World Factbook*, (Washington, D.C.: U.S. Central Intelligence Agency, updated January 10, 2006). Each country is updated for the last available year of data. Online at www.cia.gov/cia/publications/factbook/fields/2034.html

Where the Money Went

1 Weapons sales from Defense Security Cooperation Agency, open records fulfillment for *Foreign Military Sales, Foreign Military Construction Sales, and Military Assistance Facts from 1950-2002*, August 12, 2004.

Democracy & Human Rights

1 Marshall, Monty, "Polity IV Country Report 2003: Saudi Arabia," *Polity IV Project, Political Regime Characteristics and Transitions, 1800-2003* (Fairfax, VA: George Mason University, Center for Global Policy, Updated June 2005). Online at www.cidcm.umd.edu/inscr/polity/Sau1.htm

2 U.S. Dept. of State, Bureau of Public Affairs, *Background Notes* (Washington, D.C.: U.S. Dept. of State, January 2006). Online at www.state.gov/r/pa/ei/bgn/

3 Azerbaijan President Geidar Aliev's son, Ilham Aliev, succeeded his father as President of Azerbaijan in 2003 in a vote marred by fraud.

Syrian dictator, "President" Bashar al-Asad succeeded his father , Hafiz al-Asad, in 2000.

Dariga Nazarbayeva, daughter of Kazakhstan President Nursultan Nazarbayev and head of the country's central radio/TV news agency, won a seat in Parliament in 2004 and is rumored to be a possible successor when her father's 3rd presidential term is up in 2013. From "Political Forces,"

The Economist, Aug 4 2005. Online at http://www.economist.com/countries/Kazakhstan/profile.cfm?folder=Profile-Political%20Forces

4 Footnote 2, "Lebanon," August 2005.

5 *World Report 2003* (New York, NY: Human Rights Watch, 2003). Online at www.hrw.org/wr2k3/

U.S. Central Intelligence Agency, *CIA World Factbook*, op. cit.

6 Marshall, Monty, *Polity IV Project*, op. cit., Updated June 2005. Online at www.cidcm.umd.edu/inscr/polity/index.htm

7 *Freedom in the World 2006* (Washington, D.C.: Freedom House, 2006). Online at www.freedomhouse.org/uploads/pdf/Charts2006.pdf

8 *Worldwide Press Freedom Index, 2005* (Paris, France: Reporters Without Borders, 2005). Online at www.rsf.org/rubrique.php3?id_rubrique=554

9 U.S. Dept. of State, Office to Monitor and Combat Trafficking in Persons, *Trafficking in Persons Report* (Washington, D.C.: U.S. Dept. of State, June 3, 2005), p. 42. Online at www.state.gov/g/tip/rls/tiprpt/2005/

10 Footnote 5, *World Report 2003*, "Saudi Arabia." Online at www.hrw.org/wr2k3/mideast6.html

11 Ibid.

12 Ibid.

13 Ibid., "Iran." Online at www.hrw.org/wr2k3/mideast3.html

14 Ibid., "Uzbekistan." Online at www.hrw.org/wr2k3/europe16.html

15 Ibid., "Yemen." Online at http://hrw.org/wr2k2/mena10.html

16 Ibid., "Turkmentistan." Online at www.hrw.org/wr2k3/europe14.html

17 Footnote 13.

18 U.S. Dept. of State, "Executive Summary," *The International Religious Freedom Report for 2005* (Washington, D.C.: U.S. Dept. of State, November 8, 2005).

19 Footnote 15.

20 Footnote 5, "Armenia." Online at http://hrw.org/wr2k3/europe2.html

21 Ibid., "Georgia." Online at http://hrw.org/wr2k3/europe7.html

22 Footnote 13.

23 Ibid.

24 Ibid.

Corruption and Poverty

1 Transparency International, *Global Corruption Report 2006* (London, England: Pluto Press, February 2006), Chapter 10. Note that Palestine is also rated below 3, but it was not included in this analysis because of its transitional status. Online at www.transparency.org/publications/gcr

2 Derived from *National Accounts Main Aggregates Database* (New York, NY: United Nations Statistics Division, 2006). Online at http://unstats.un.org/unsd/snaama/Introduction.asp

3 Derived from U.S. Central Intelligence Agency, *CIA World Factbook*, op. cit. Online at www.cia.gov/cia/publications/factbook/fields/2091.html

4 Footnote 2, Democracy & Human Rights. Online at www.state.gov/r/pa/ei/bgn/

High Qatar estimate comes from Johnson, Chalmers, *Sorrows of Empire, op. cit.*, p. 246.

5 Footnote 2, The World's Service Station.

6 Global Security.org, "Al Udeid Air Base, Qatar," Alexandria, VA, *U.S. Central Command Facilities*, 2004/5. Online at www.globalsecurity.org/military/facility/udeid.htm

7 Ibid., "Camp Arifjan." Online at www.globalsecurity.org/military/facility/camp-arifjan.htm

8 Raphaeli, Nimrod, "Saudi Arabia: A Brief Guide To Its Politics and Problems," *Middle East Review of International Affairs*, Volume 7, No. 3, September 2003. Online at meria.idc.ac.il/journal/2003/issue3/jvol7no3in.html

9 Ibid.

10 Baer, Robert, *Sleeping With the Devil* (New York, NY: Crown Publishers, 2003), p. 160-1.

Cordesman, Anthony, "The United States, Japan, Europe and the Gulf: Meeting External Challenges," Center for Strategic and International Studies (Washington, D.C.: Center for Strategic and International Studies, March, 1997). Online at www.csis.org/stratassessment/reports/euusjglf.html

11 Footnote 2.

12 Gallick, Daniel, Ed., *World Military Expenditures and Arms Transfers 1999-2000*, U.S. Dept. of State, Bureau of Verification and Compliance, Washington, D.C., (Washington, D.C.: U.S. Dept. of State, June 2002), p. 27. Online at www.fas.org/asmp/profiles/wmeat/WMEAT99-00/WMEAT99-00.pdf

13 United Nations Office of Drugs and Crime, *Summary Findings of Opium Trends in Afghanistan, 2005* (Vienna, Austria: United Nations Office of Drugs and Crime, September 12, 2005). Online at www.unodc.org/afg/en/reports_surveys.html

14 Kleveman, Lutz, *The New Great Game* (New York, NY: Atlantic Monthly Press, 2003), p. 81-3.

Footnote 5, Democracy & Human Rights, "Kazakhstan." Online at www.hrw.org/wr2k3/europe8.html

"Mobil, CIA secrets may come out," *Bloomberg*, August 25, 2005. Online at www.corpwatch.org/article.php?id=12586

15 Ibid.

16 Ibid.

17 Footnote 5, Democracy & Human Rights, "Kazakhstan." Online at www.hrw.org/wr2k3/europe8.html

18 Ibid.

19 Ibid.

20 Ibid.

21 Ibid.

22 "SOCAR chief denies bribery accusations," *Alexander's Gas & Oil Connections*, October 26, 2005. Online at www.gasandoil.com/goc/company/cnc54397.htm

23 Committee on Oil Industry Workers' Rights Protection, "Report on corruption in Azerbaijan oil industry prepared for EBRD & IFC investigation arms" (Praha, Czech Republic: CEE Bankwatch Network, October 8, 2003). Online at www.bankwatch.org/project.shtml?apc=147579-153907n—1&x=174740

24 Ibid.

25 Belev, Boyan, Ed., *The Informal Economy in the EU Accession Countries* (Sofia, Bulgaria: Center for the Study of Democracy, 2003), p. 7.

26 Green Alternative, et. al., *International Fact Finding Mission, Preliminary Report, Azerbaijan, Georgia, Turkey Pipelines Project, Azerbaijan Section* (Oxford, U.K.: Baku Ceyhan Campaign, updated 2005), p. 8. Online at www.bakuceyhan.org.uk/publications/pipelines-factfinding-azerbaijan.pdf

27 Baer, Robert, *Sleeping With the Devil*, op. cit., pp. 172-3.

28 Ibid., pp. 170-2.

Unger, Craig, *House of Bush, House of Saud*, Scribner, New York, NY, 2004, p. 87.

29. Ibid.

Resource Use – Like Lemmings

1 Derived from United Nations populations projections between 2005 and 2025. Online at http://esa.un.org/unpp/

2 Ibid.

3 Ibid.

4 This is defined as percent of Land Area under severe water stress. From Center for Environmental Systems Research, University of Kassel, Germany, WaterGap 2.1, 2000.

5 *2004 World Development Indicators* (Washington D.C.: The World Bank, 2004), p. 122, 126.

6 Ibid, p. 122.

7 U.N. Food and Agricultural Organization, Food Balance Sheet for Saudi Arabia for 2002. Online at http://apps.fao.org/pageform?collection=Forestry.Derived&Domain=Forestry&servlet=1&language=EN&hostname=apps.fao.org&version=default

8 "The Aral Sea disappears while tuberculosis climbs," *Medecins Sans Frontierres*, March 13, 2003. Online at http://www.msf.org/msfinternational/invoke.cfm?objectid=364F0F06-88B8-4441-BF545983259E50B6&component=toolkit.article&method=full_html&CFID=546842&CFTOKEN=79209020

9 Ibid.

Aral Sea, *Wikipedia*. Online at http://en.wikipedia.org/wiki/Aral_Sea

Cai1, Ximing, et. al, *Sustainability Analysis for Irrigation Water Management in the Aral Sea Region*, Discussion Paper No. 86 (Washington, D.C.: International Food Policy Research Institute, 2001). Online at http://www.ce.utexas.edu/prof/mckinney/papers/aral/eptdp86.pdf

Petrolistan - The Sequel

1 Derived from British Petroleum, *Statistical Review of World Energy 2005,* "Oil Production – barrels" and "Oil – Proved reserves."

2 Derived from Footnote 1 and Althaus, Dudley, "High Cost of Energy: Nigeria," *The Houston Chronicle*, Dec. 17, 2004.
Online at www.chron.com/disp/story.mpl/world/2934700.html

3 Foxcroft, Tori, "Nigeria's oil crisis," *News24.com*, Capetown, South Africa, July 29, 2004. Online at www.news24.com/News24/Africa/Features/0,,2-11-37_1565082,00.html

4 Madunagu, Emeka, "Why we're deploying troops near Nigeria – US," *The Punch*, Ikeja, Lagos, Nigeria, June 04 2004. Online at www.odili.net/news/source/2004/jun/4/39.html

5 Igbikiowubo, Hector, "US Offers Nigeria Military Aid to Protect Offshore Oil," *All Africa*, July 26, 2004.

6 Miller, T. Christian, "Riding Shotgun on a Pipeline," *Los Angeles Times*, May 16, 2004.

7 "Oil declining, Colombia offers new deal in Houston," *Reuters*, Mar 10, 2004.

8 Footnote 6.

9 See footnote 7, Resource Use.

10 Derived from 2002 data in U.S. Dept. of Agriculture, *Agricultural Statistics 2005* (Washington, D.C.: U.S. Dept. of Agriculture, 2006), Chapter 1 and U.N. Food and Agricultural Organization, Food Balance Sheet for Cereal Grains for all countries in 2002.

11 Sinclair, Minor and Martha Thompson, *Cuba: Going Against the Grain*, Oxfam America, (Boston, MA: Oxfam America, June 2001), Chapter 1. Online at www.oxfamamerica.org/newsandpublications/publications/research_reports/art1164.html/?searchterm=cuba

12 Bamberger, Robert, "Automobile and Light Truck Fuel Economy: The CAFE Standards," *Policy Almanac*, Updated September 25, 2002. Online at www.policyalmanac.org/environment/archive/crs_cafe_standards.shtml

13 Dept. of Energy, Office of Energy Efficiency and Renewable Energy, "10 CFR Part 430, *Federal Register*, Rules and Regulations" (Washington, D.C.: U.S. Government Printing Office, August 17, 2004), Vol. 69, No. 158, p. 50997.