IRAQ'S PROGRAMME FOR 
WEAPONS OF MASS DESTRUCTION:

THE BRITISH GOVERNMENT ASSESSMENT
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1. Under Saddam Hussein, Iraq has developed chemical and biological weapons, acquired missiles allowing it to attack neighbouring countries with these weapons, and tried hard to develop a nuclear bomb. Iraq has admitted to all these programmes to acquire weapons of mass destruction. And Saddam has used chemical weapons, both against Iran and against his own people.

2. Information about Iraq's weapons of mass destruction is already in the public domain from UN reports and from Iraqi defectors. A valuable assessment was provided by the International Institute for Strategic Studies (IISS) on 9 September. The publicly available evidence points clearly to Iraq's continued possession of chemical and biological agents and weapons from before the Gulf War. It shows that Iraq has refurbished sites formerly associated with the production of chemical and biological agents. And it indicates a continuing Iraqi ability to manufacture these agents, and to use bombs, shells, artillery rockets and ballistic missiles to deliver them. The IISS report also judges that Iraq could assemble nuclear weapons within months of obtaining fissile material from foreign sources.

3. We endorse much of this analysis, which is largely based on information available prior to the de facto expulsion of UN inspectors in 1998. But significant additional information is available to the government from secret intelligence sources, described in more detail in this paper. This intelligence cannot tell us about everything. But it provides a fuller picture of Iraqi plans and capabilities. It shows that Saddam Hussein attaches great importance to possessing weapons of mass destruction which he regards as the basis for Iraq's regional power. It shows that he does not regard them only as weapons of last resort. He is ready to use them, including against his own population, and is determined to retain them. Intelligence also shows that Iraq is preparing plans to conceal evidence of these weapons from any renewed inspection, including by dispersing incriminating documents. And it allows us to judge that Iraq...
has continued to produce chemical and biological agents;

- has military plans for the use of chemical and biological weapons, some of which could be ready within 45 minutes of an order to use them. Saddam and his son Qusay have the political authority to authorise the use of these weapons;

- has developed mobile laboratories for military use, corroborating earlier reports about the mobile production of biological warfare agents;

- has assembled specialists to work on its nuclear programme;

- has pursued illegal programmes to procure controlled materials of potential use in the production of chemical and biological weapons programmes;

- has sought significant quantities of uranium from Africa, despite having no civil nuclear programme that could require it;

- is covertly trying to acquire technology and materials which could be used in the production of nuclear weapons, including specialised aluminium controlled because of its potential use in enriching uranium;

- has retained up to 20 Al Hussem missiles, capable of carrying chemical or biological warheads;

- is deploying its Al-Samoud liquid propellant missile, and has used the absence of weapons inspectors to work on extending its range beyond the limit of 150km imposed by the United Nations;

- is producing the solid-propellant missile Ababil-100, and is making efforts to extend its range;

- has constructed a new engine test stand for missiles capable of threatening Israel and all Iraq’s Gulf neighbours as well as the UK Sovereign Bases in Cyprus and NATO members (Greece and Turkey);

- has pursued illegal programmes to procure materials for use in its illegal development of long range missiles;

- has begun dispersing its most sensitive weapons, equipment and material.

4. These judgements have been endorsed by the Joint Intelligence Committee (JIC). More details on the judgements, and on the development of the JIC’s assessments since 1998, are set out later in this paper.
5. The importance of denying Saddam access to weapons of mass destruction was recognised by the United Nations in a series of Resolution between 1991 and 1998. The paper sets out the key UN Security Council Resolutions, accepted by Iraq, which required the destruction of these weapons. It also summarises the history of the UN inspections regime. This includes both the extent of Saddam's capabilities uncovered by the inspectors and Iraq's history of dishonesty, deception, intimidation and concealment in its dealings with the UN inspectors.

6. But the threat from Iraq does not depend solely on the capabilities we have described. It arises also because of the violent and aggressive nature of Saddam's regime. His record of internal repression and external aggression gives rise to unique concerns about the threat he poses. The paper briefly outlines his rise to power, the nature of his regime and his history of regional aggression. Vivid and horrifying accounts of Saddam's human rights abuses are also catalogued.

7. The paper briefly sets out how Iraq is able to finance its weapons programme. Drawing on illicit earnings generated outside UN control, Iraq generated income of some $3 billion in 2001.

8. The paper concludes with a summary table setting out key points on Iraq's capabilities.
PART 1

IRAQ'S CHEMICAL, BIOLOGICAL, NUCLEAR AND BALLISTIC MISSILE PROGRAMMES

CHAPTER 1: THE ROLE OF INTELLIGENCE

1. Since UN Inspectors were, in effect, expelled by Iraq in 1998, there has been little overt information on Iraq's chemical, biological, nuclear and ballistic missile programmes. Much of the publicly available information about Iraqi capabilities and intentions is necessarily dated. But we also have available a range of secret intelligence about these programmes and Saddam's intentions. This comes principally from the United Kingdom's intelligence and analysis agencies - the Secret Intelligence Service (SIS), the Government Communications Headquarters (GCHQ) and the Defence Intelligence Staff (DIS). We also have access to intelligence from close allies.

2. Intelligence rarely offers a complete account of activities which are designed to remain concealed. And the nature of Saddam's regime makes Iraq a difficult target for the intelligence services. Nonetheless, we have been able to develop a range of well positioned sources. The need to protect and preserve these sources inevitably limits the detail that can be made available. But intelligence has provided important insights into Iraqi programmes, and into Iraqi military thinking. Taken together with what is already known from other sources, this builds our understanding of Iraq's capabilities, and adds significantly to the analysis already in the public domain.

3. Iraq's capabilities have been regularly reviewed by the Joint Intelligence Committee (JIC), which has provided advice to the Prime Minister on the developing assessment on the basis of all available sources. Part 1 of this paper includes some of the most significant views reached by the JIC between 1999 and 2002.
Joint Intelligence Committee (JIC)
The JIC is a Cabinet Committee with a history dating back to 1936. It brings together the Heads of the three Intelligence and Security Agencies (Secret Intelligence Service, Government Communications Headquarters and the Security Service), the Chief of Defence Intelligence and senior policy makers from the Foreign Office, the Ministry of Defence, the Home Office, the Treasury and the Department of Trade and Industry. It provides regular intelligence assessments to the Prime Minister, other Ministers and senior officials on a wide range of foreign policy and international security issues. The JIC meets each week in the Cabinet Office. Its current chairman is John Scarlett

1. Iraq has been involved in chemical and biological warfare research for over 30 years. Its chemical warfare research commenced in 1971 at a small, well guarded site at Rashad to the Northeast of Baghdad. Research was conducted here on a number of chemical agents including Mustard Gas, CS and Tabun. Later, in 1974 a dedicated organisation called Al-Hassan Ibn Al-Haitham was established. At the same time plans were made to build a large research and commercial-scale production facility in the desert some 70km Northwest of Baghdad under the Project cover of No 922. This was to become Muthanna State Establishment, also known as al-Muthanna, and operated under the front name of Iraq’s State Establishment for Pesticide Production. It became partially operational in 1982-83. It had five research and development sections each tasked to pursue different programmes. In addition, the al-Muthanna site was the main chemical agent production facility, and it also took the lead in weaponising chemical and biological agents including all aspects of weapon development and testing, in association with the military. According to information, subsequently supplied by the Iraqis, the total production capacity in 1991 was 4,000 tonnes of agent per annum, but we assess it could have been higher. Al-Muthanna was supported by three separate storage and precursor production facilities known as Fallujah 1, 2 and 3 near Habbaniyah, north-west of Baghdad, parts of which were not completed before they were heavily bombed in the 1991 Gulf War.

2. Iraq started biological warfare research in the mid-1970s. After small-scale research, a purpose-built research and development facility was authorised at al-

Effects of Chemical Weapons

Mustard is a liquid agent, which gives also gives off a hazardous vapour, causing burns and blisters to exposed skin. When inhaled, mustard damages the respiratory tract; when ingested, it causes vomiting and diarrhoea. It attacks and damages the eyes, mucous membranes, lungs, skin, and blood-forming organs.

Tabun, sarin and VX are all nerve agents of which VX is the most toxic. They all damage the nervous system, producing muscular spasms and paralysis. As little as 10 milligrammes of VX on the skin can cause rapid death. 1 grammes kills .people
Salman, also known as Salman Pak. This is surrounded on three sides by the Tigris river and situated some 35km South of Baghdad. Although some progress was made in biological weapons research at this early stage, Iraq decided to concentrate on developing chemical agents and their delivery systems at al-Muthanna. With the outbreak of the Iran-Iraq War, in the early 1980s, the biological weapons programme was revived. The appointment of Dr Rihab Taha in 1985, to head a small biological weapons research team at al-Muthanna, helped to develop the programme. At about the same time plans were made to develop the Salman Pak site into a secure biological warfare research facility. Dr Taha continued to work with her team at Muthanna until 1987 when it moved to Salman Pak, which was under the control of the Directorate of General Intelligence. Significant resources were provided for the programme, including the construction of a dedicated production facility, (Project 324) at al-Hakam. Agent production began in 1988 and weaponisation testing and later filling of munitions was conducted in association with the staff at Muthanna State Establishment. From mid-1990, other civilian facilities were taken over and some adapted for use in the production and research and development of biological agents. These included:

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**The effects of biological agents**

- **Anthrax** is a disease caused by the bacterium Bacillus anthracis. Inhalation anthrax is the manifestation of the disease likely to be expected in biological warfare. The symptoms may vary, but can include fever and internal bleeding. The incubation period for anthrax is 1 to 7 days, with most cases occurring within 2 days of exposure.

- **Botulism toxin** is one of the most toxic substances known to man. The first symptoms of poisoning may appear as early as 1 hour post exposure or as long as 8 days after exposure, with the incubation period between 12 and 22 hours. Paralysis leads to death by suffocation.

- **Aflatoxins** are fungal toxins, which are potent carcinogens. Most symptoms take a long time to show. Food products contaminated by aflatoxin can cause liver inflammation and cancer. It can also affect pregnant women, leading to stillborn babies and children born with mutations.

- **Ricin** is derived from the castor bean and can cause multiple organ failure leading to death within one or two days of inhalation.


- Daura Foot and Mouth Vaccination Plant which produced botulinum toxin and conducted virus research. There is some intelligence to suggest that work was also conducted on anthrax,

- al-Fudaliyah Agriculture and Water Research centre where Iraq admitted it undertook Aflatoxin production and genetic engineering:

- Amariyah Sera and Vaccine Institute which was used for the storage of biological agent seed stocks, and was involved in genetic engineering

3. By the time of the Gulf War Iraq was producing very large quantities of chemical and biological agents. From a series of Iraqi declarations to the UN during the 1990s we know that by 1991 they had produced at least:

- 19,000 litres of botulinum toxin, 8,500 litres of anthrax, 2,200 litres of aflatoxin, and were working on a number of other agents;
- 2,850 tonnes of mustard gas, 210 tonnes of tabun, 795 tonnes of sarin and cyclosarin, and 3.9 tonnes of VX.

4. Iraq's nuclear programme was established under the Iraqi Atomic Energy Commission in the 1950s. Under a nuclear co-operation agreement signed with the Soviet Union in 1959, a nuclear research centre, equipped with a research reactor, was built at Tuwaitha, the main Iraqi nuclear research centre. The surge in Iraqi oil revenues in the early 1970s supported an expansion of the research programme. This was bolstered by the signing of co-operation agreements with France and Italy in the mid-1970s. France agreed to supply two research reactors powered by highly enriched uranium fuel, and Italy supplied equipment for fuel fabrication and handling. By the end of 1984 Iraq was self-sufficient in uranium ore. One of the reactors was destroyed in an Israeli air attack in June 1981 shortly before it was to become operational, the other was never completed.
5. By the mid-1980s the deterioration of Iraq's position in the war with Iran prompted renewed interest in the military use of nuclear technology, and additional resources were put into developing technologies to enrich uranium as fissile material for use in nuclear weapons. Enriched uranium was preferred because it could be produced more covertly than the alternative, plutonium. Iraq followed parallel programmes to produce highly enriched uranium: electromagnetic isotope separation (EMIS) and gas centrifuge enrichment. By 1991 one EMIS enrichment facility was nearing completion and another was under construction. Centrifuge facilities were also under construction, but the centrifuge design was still being developed. In August 1990 Iraq instigated a crash programme to develop a single nuclear weapon within a year, and envisaged the rapid development of a small 50 machine gas centrifuge cascade to produce the highly enriched uranium required. By the time of the Gulf War, the programme had made little progress. But, by that stage, Iraq decided to concentrate on gas centrifuges as the means for producing the necessary fissile material.

6. Iraq's declared aim was to produce a weapon with a 20-kiloton yield and weapons designs were produced for both a simple gun-type device and for more complex implosion weapons. The latter were similar to the device used at Hiroshima in 1945. Iraq was also working on more advanced concepts. By 1991 the Iraqi programme was supported by large body of Iraqi nuclear expertise, programme documentation and databases and manufacturing infrastructure. On the basis of reports from UN inspections after the Gulf War it was eventually concluded that in 1991 Iraq was away from producing a nuclear weapon.

7. Prior to the Gulf War, Iraq had a well-developed **ballistic missile** industry. Most of the missiles fired in the Gulf War were an Iraqi produced version of the SCUD
SCUD missiles
The short-range mobile SCUD ballistic missile was developed by the Soviet Union in the 1950s, drawing on the technology of the German V-2 developed in World War II.

For many years it was the mainstay of Soviet and Warsaw Pact tactical missile forces, and it was also widely exported. Recipients of Soviet-manufactured SCUDs included Iraq, North Korea, Iran, and Libya, although not all were sold directly by the Soviet Union.

Missile, the Al Hussein, with an extended range of 650 km. Numbers before war.... Iraq was working on other stretched SCUD variants, such as the Al Abbas, which had a range of 900km. Iraq was also seeking to reverse engineer the SCUD engine with a view to producing new missiles; recent evidence indicates that they may have succeeded at that time. In particular Iraq had plans for a new SCUD-derived missile with a range of 1200km. Iraq also conducted a partial flight test of a multi-stage satellite launch vehicle based on SCUD technology, known as the Al Abid. Also during this period, Iraq was developing the BADR-2000, a 700-1000km range two-stage solid propellant missile (based on the Iraqi part of the 1980s CONDOR-2 programme run in cooperation with Argentina and Egypt). There were plans for 1200-1500km range solid propellant follow-on systems.

The use of chemical and biological weapons

8. Iraq had made frequent use of a variety of chemical weapons during the Iran-Iraq War. (Many of the casualties are still alive in Iranian hospitals suffering from the long-term effects of numerous types of cancer and lung diseases.) In 1988 Saddam also used mustard and nerve agents against Iraqi Kurds at Halabja in northern Iraq (see photograph). Estimates vary, but according to Human Rights Watch up to 5,000 people were killed.

9. A month after the attack on Halabja, Iraqi troops used over 100 tons of sarin nerve agent against Iranian troops on the Al Fao peninsula. Over the next three months Iraqi troops used sarin and other nerve agents on Iranian troops causing extensive casualties.
The Attack on Halabja

Shortly before sunrise on Friday, 17th March 1988, the village of Halabja was bombarded by Iraqi warplanes. The raid was over in minutes. Saddam Hussein used chemical weapons against his own people. A Kurd described the effects of a chemical attack on another village:

"My brothers and my wife had blood and vomit running from their noses and their mouths. Their heads were tilted to one side. They were groaning. I couldn't do much, just clean up the blood and vomit from their mouths and try in every way to make them breathe again. I did artificial respiration on them and then I gave them two injections each. I also rubbed creams on my wife and two brothers."

(From “Crimes Against Humanity,” Iraqi National Congress.)

Among the corpses at Halabja, children were found dead where they had been playing outside their homes. In places, streets were piled with corpses.

10. Intelligence indicates that in 1991 Iraq used the biological warfare agent aflatoxin against the Shia population of Karbala.

11. From Iraqi declarations to the UN after the Gulf War we know that by 1991 Iraq had produced a variety of delivery means for chemical and biological agents including 75 ballistic missile warheads, over 16,000 free fall bombs and over 110,000 artillery rockets and shells.

The use of ballistic missiles

12. Iraq fired over 500 SCUD-type missiles at Iran during the Iran-Iraq War at both civilian and military targets, and 93 SCUD-type missiles during the Gulf War. The
latter were targeted at Israel and at Coalition forces stationed in the Gulf region. Armed with conventional warheads they did only limited damage. Iraq subsequently admitted to UNSCOM that it had 50 chemical and 25 biological warheads available for these missiles. It is not clear if the warheads were ever mated to the missiles. In any event they were not used.

13. At the end of the Gulf War the international community was determined that Iraq's arsenal of chemical and biological and ballistic missiles should be dismantled. The method chosen to achieve this aim was the establishment of the UN Special Commission (UNSCOM) to carry out intrusive inspections within Iraq and to eliminate its chemical and biological weapons and ballistic missiles with a range over 150km. The International Atomic Energy Agency (IAEA) was charged with the abolition of Iraq's nuclear weapons programme. Between 1991 and 1998 UNSCOM and the IAEA succeeded in identifying and destroying very large quantities of chemical and biological weapons and ballistic missiles as well as associated production facilities. They also destroyed the infrastructure for Iraq's nuclear weapons programme. This was achieved despite a continuous and sophisticated programme of harassment, obstruction and deception and denial (see Part 2). By 1998 UNSCOM concluded that they were unable to fulfil their mandate. The inspectors were withdrawn in December 1998.

14. Based on the UNSCOM report to the UN Security Council in January 1999 and earlier UNSCOM reports, we assess that when the UN inspectors left Iraq they were unable to account for:

- up to 360 tonnes of bulk chemical warfare agent, including 1.5 tonnes of VX nerve agent;
- up to 3,000 tonnes of precursor chemicals, including approximately 300 tonnes which, in the Iraqi CW programme, were unique to the production of VX;
growth media procured for biological agent production (enough to produce over three times the 8,500 litres of anthrax spores Iraq admits to ‘having manufactured’);

over 30,000 special munitions for delivery of chemical and biological agents.

15. The departure of the Inspectors meant that the International Community was unable to establish the truth behind these large discrepancies. It also greatly diminished our ability to monitor and assess Iraq’s continuing attempts to reconstitute its programmes.

16. While the enforcement of the sanctions regimes and the UN arms embargo and US/UK air operations in 1998 have impeded Iraq’s efforts to reconstitute its weapons of mass destruction, they have not halted them. Much of Iraq’s missile infrastructure has been rebuilt; the nuclear weapons programme is being reconstituted, albeit with difficulty; and Iraq continues to produce chemical and biological agents.

1. This chapter sets out what we now know of Saddam’s chemical, biological, nuclear and ballistic missile programmes, drawing on all the available evidence. While it takes account of the results from UN inspections and other publicly available information, it also draws heavily on intelligence about Iraqi efforts to develop their programmes and capabilities since 1998. The main conclusions are that:

- Iraq has a useable chemical and biological weapons capability, in breach of UNSCR 687, which has included recent production of chemical and biological agents;

- Saddam continues to attach great importance to the possession of weapons of mass destruction and ballistic missiles, which he regards as being the basis for Iraq’s regional power. He is not prepared to lose capabilities he has developed over the last four years;

- Iraq can deliver chemical and biological agents using an extensive range of artillery shells, free-fall bombs, sprayers and ballistic missiles;

- Iraq continues to work on developing nuclear weapons, in breach of its obligations under the Non-Proliferation Treaty, and in breach of UNSCR 687. Uranium has been sought from Africa that has no known civil nuclear application in Iraq;

- Iraq possesses extended-range versions of the SCUD ballistic missile, capable of reaching Tehran, Eastern Turkey and Cyprus in breach of UNSCR 687. It is also developing longer range ballistic missiles;

- Iraq’s current military planning specifically envisages the use of chemical and biological weapons;

- Iraq’s military forces maintain the capability to use chemical and biological weapons, with command, control and logistical arrangements in place. The Iraqi military may be able to deploy these weapons within forty five minutes of a decision to do so;
Iraq is already taking steps to undermine the return of any UN weapons inspectors through concealment and dispersal of sensitive equipment and documentation;

Iraq's chemical, biological, nuclear and ballistic missiles programmes are not short of funds, despite the parlous state of the Iraqi economy.

CHEMICAL AND BIOLOGICAL WEAPONS

JIC Assessment: 1999-2002

2. Since the withdrawal of the inspectors the Joint Intelligence Committee (JIC) has monitored evidence, including from secret intelligence, of continuing work on Iraqi offensive chemical and biological warfare capabilities. In the first half of 2000 the JIC noted intelligence on Iraq's attempts to procure dual-use chemicals and the reconstruction of civil chemical production at sites formerly associated with the chemical warfare programme. Iraq had also been trying to procure dual-use materials and equipment which could be used for a biological warfare programme. Personnel known to have been connected to the biological warfare programme up to the Gulf War had been conducting research into pathogens. There was intelligence that Iraq was starting to produce biological warfare agents in mobile production centres. Planning for the project had begun in 1995 under Dr Rihab Taha, known to have been a central player in the pre-1995 programme. The JIC concluded that Iraq had sufficient expertise, equipment and material to produce biological weapons agents within weeks using its legitimate biotechnology facilities.

3. A JIC assessment in mid-2001 concluded that intelligence on Iraqi former chemical and biological warfare facilities, their limited reconstruction and civil production pointed to a continuing research and development programme. Since 1998 Iraqi development of mass destruction weaponry had been helped by the absence of inspectors and the increase in illegal border trade, which provided available hard currency.

4. In early 2002 the JIC assessed that Iraq retained production equipment, stocks of chemical agents and at least small amounts of precursors from before the Gulf War. Iraq could produce quantities of mustard gas within weeks and of Sarin and VX within months. In the case of VX it might already have done so. Iraq held stocks of biological agents from either before the Gulf
War or from more recent production. The JIC judged Iraq to be self-sufficient in the production of biological weapons. It also judged that Iraq had the means to deliver chemical and biological weapons.

**Recent Intelligence**

5. Subsequently, intelligence has become available from reliable sources which complements and adds to previous intelligence and confirms the JIC assessment that Iraq has chemical and biological weapons. The intelligence also shows that the Iraqi leadership has been discussing a number of issues related to these weapons. This intelligence covers:

- **Confirmation that chemical and biological weapons play an important role in Iraqi military thinking.** Intelligence shows that Saddam attaches great importance to the possession of weapons of mass destruction which he regards as being the basis for Iraqi regional powers. He believes that respect for Iraq rests on its possession of chemical and biological weapons and the missiles capable of delivering them. Intelligence indicates that Saddam is determined to retain this capability and recognises that Iraqi political weight would be diminished if Iraq's military power rested solely on its weakened conventional military forces.

- **Iraqi attempts to retain its existing banned weapons systems:** Iraq is already taking steps to undermine the possible return of any UN weapons inspectors: Iraq has begun removing sensitive equipment and papers relating to its chemical and biological programmes and dispersing them beyond the gaze of inspectors, for example by hiding sensitive documents in the homes of his trusted officials. Saddam is determined not to lose the capabilities that he has been able to develop in the four years since inspectors left.

- **Saddam’s willingness to use chemical and biological weapons:** intelligence indicates that Saddam is prepared to use chemical and biological weapons if he believes his regime is under threat. We also know from intelligence that as part of Iraq’s military planning, Saddam is willing to use chemical and biological weapons against any internal uprising by the Shia population. The Iraqi military may be able to deploy chemical or biological weapons within forty five minutes of an order to do so.

**Chemical and biological agents: surviving stocks**

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6. When confronted with questions about the unaccounted stocks, Iraq has claimed, repeatedly, that if it had retained any chemical agents from before the Gulf War they would have deteriorated sufficiently to render them harmless. But Iraq has admitted to having the knowledge and capability to add stabiliser to nerve agent which would prevent such decomposition.

7. Iraq has claimed that all its biological agents and weapons have been destroyed. No convincing proof of any kind has been produced to support this claim. In particular, Iraq could not explain large discrepancies between the amount of growth media (nutrients required for the specialised growth of agent) it procured before 1991 and the amounts of agent it admits to having manufactured. The discrepancy is enough to produce more than three times the amount of anthrax allegedly manufactured.

Chemical agent: production capabilities

8. Intelligence confirms that Iraq has continued to produce chemical agent. During the Gulf War a number of facilities which intelligence reporting indicated were directly or indirectly associated with Iraq’s chemical weapons effort were attacked and damaged. Following the ceasefire UNSCOM destroyed or rendered harmless facilities and equipment used in Iraq's chemical weapons programme. Other equipment was released for civilian use either in industry or academic institutes, where it was tagged and regularly inspected and monitored, or else placed under camera monitoring, to ensure that it was not being misused. This monitoring ceased when UNSCOM withdrew from Iraq in 1998. However, capabilities remain and, although the main chemical weapon production facility at al-Muthanna was completely destroyed by UNSCOM and has not been rebuilt, other plants formerly associated with the chemical warfare programme have been rebuilt. This includes the chlorine and phenol plant at Fallujah 2 near Habbaniyah. In addition to their civilian uses, chlorine and phenol are used for precursor chemicals which contribute to the production of chemical agents.

9. The expansion of chlorine production facilities at Fallujah 2 gives Iraq a capacity well beyond that required for Iraq’s civilian needs.
10. Other dual use facilities, which could be used to support the production of chemical agent and precursors, have been rebuilt and re-equipped. New chemical facilities have been built, some with illegal foreign assistance, and are probably fully operational or ready for production. These include the Ibn Sina Company at Tarmiya (see figure 1), which is a chemical research centre. It undertakes research, development and production of chemicals previously imported but not now available and which are needed for Iraq's civil industry. But it is known to be supporting the missile programme and could also be involved in the chemical weapons programme. The Director General of what is Hickmat Na'am al-Jalu who, prior to the Gulf War worked in Iraq's nuclear weapons programme and after the war was responsible for preserving Iraq's chemical expertise.

11. Iraq has retained the expertise for chemical warfare research, agent production and weaponisation. Most of the personnel previously involved in the programme remain in country. Indeed, intelligence indicates that Haidar Husain Taha, recently reported in the media as being the factory manager of the Fallujah 2 plant, is almost certainly the same individual...
who from 1984 until the end of the Gulf war worked at Iraq's CW programme at the Muthanna State Establishment researching mustard gas. While UNSCOM found a number of technical manuals (so called "cook books") for the production of chemical agents and critical precursors, Iraq's claim to have unilaterally destroyed the bulk of the documentation cannot be confirmed and is almost certainly untrue. Recent intelligence indicates that Iraq is still discussing methods of concealing such documentation in order to ensure that it is not discovered by any future UN inspections.

The Problem of Dual Use Facilities

Almost all components and supplies used in weapons of mass destruction and ballistic missile programmes are dual-use. For example, any major petrochemical or biotech industry, as well as public health organisations, will have legitimate need for most materials and equipment required to manufacture chemical and biological weapons. Without UN weapons inspectors it is very difficult therefore to be sure about the true nature of many of Iraq's facilities.

For example, Iraq has built a large new chemical complex, Project Baiji, in the desert in north west Iraq at Ash Sharqat (see figure 2). This site is a former uranium enrichment facility, which was damaged during the Gulf War, and rendered harmless under supervision of the IAEA. Part of the site has been rebuilt, with work starting in 1992, as a chemical production complex. Despite the site being far away from populated areas it is surrounded by a high wall with watch towers and guarded by armed guards. Intelligence reports indicate that it will produce nitric acid, which can be used in explosives, missile fuel, and in the purification of uranium.
Biological agent: production capabilities

12. We know from intelligence that Iraq has continued to produce biological warfare agents. As with some chemical equipment, UNSCOM only destroyed equipment that could be directly linked to biological weapons production. Iraq also has its own engineering capability to design and construct biological agent associated fermenters, centrifuges, sprayer dryers and other equipment and is judged to be self-sufficient in the technology required to produce biological weapons. The experienced personnel who were active in the programme have largely remained in the country. They include........Some dual-use equipment, including growth media, has also been purchased under the Oil for Food programme, but without monitoring of the equipment by UN inspectors Iraq could have diverted it to their biological weapons programme. This newly purchased equipment and others previously subject to monitoring could be used in a resurgent BW programme. Facilities of concern include:

- the Castor Oil Production Plant at Fallujah: this was damaged in UK?US air attacks in 1998 (Operations Desert Fox) but has rebuilt. The residue from the castor bean pulp can be used in the production of ricin biological agent;
- the Al-Daura Foot and Mouth Disease Vaccine Plant, which was involved in biological agent production and research before the Gulf War. This has probably been renovated;
- The Amariyah Sera and Vaccine plant at.....UNSCOM established that this was used to produce biological agents prior to the Gulf War. It has now expanded its storage capacity.

13. UNSCOM established that Iraq was planning to conceal from the inspectors the capability to produce biological warfare agents by developing mobile facilities. In the past two years evidence from defectors has indicated the existence of such facilities. Recent intelligence confirms that the Iraqi military have developed mobile facilities. These would help Iraq conceal and protect biological agent production from military attack or UN inspection.

Chemical and biological agents: delivery means

14. Iraq has a variety of delivery means available for both chemical and biological agents. These include:
• free fall bombs - Iraq acknowledged to UNSCOM the deployment to four sites of free fall bombs filled with biological agent during 1990-91. These bombs were filled with anthrax, botulinum toxin and aflatoxin. Iraq also acknowledged possession of four types of aerial bomb with various chemical agent fills including sulphur mustard, tabun, sarin, cyclosarin, and VX;

• artillery shells and rockets - Iraq made extensive use of artillery munitions filled with chemical agents during the Iran-Iraq War. Mortars can also be used for chemical agent delivery. Iraq also claimed to have tested the use of shells and rockets filled with biological agents. Over 20,000 artillery munitions remain unaccounted for by UNSCOM;

• helicopter and aircraft borne sprayers - Iraq carried out studies into aerosol dissemination of biological agent using these platforms prior to 1991. UNSCOM was unable to account for many of these devices. It is probable that Iraq retains a capability for aerosol dispersal of both chemical and biological agent;

• Al Hussein ballistic missiles (range 650km) - Iraq told UNSCOM that it filled 25 warheads with anthrax, botulinum toxin and aflatoxin. Iraq also developed chemical agent warheads for Al Hussein. Iraq admitted to producing 50 chemical warheads for Al Hussein which were intended for the delivery of a mixture of sarin and cyclosarin. However, technical analysis of warhead remnants has shown traces of VX degradation product which indicate that some additional warheads were made and filled with VX;

• Al Samoud/Ababil 100 ballistic missiles (range 150km plus) - It is unclear if chemical and biological warheads have been developed for these systems, but given their experience on other missile systems, we judge that Iraq has the technical expertise for doing so;

• L-29 remotely piloted vehicle programme (see figure 3) - we know from intelligence that Iraq has attempted to modify the L-29 jet trainer to allow it to be used as a pilot-less aircraft (unmanned aerial vehicle - UAV) for the delivery of chemical and biological agents over a large area. This modification programme has had problems and Iraq is now focusing on developing smaller UAVs.

CONFIDENTIAL UNTIL RELEASED
Chemical and biological warfare: command and control

15. The authority to use chemical and biological weapons ultimately resides with Saddam, but intelligence indicates that he may have also delegated this authority to his son Qusai. Special Security Organisation (SSO) and Special Republican Guard (SRG) units would be involved in the movement of any chemical and biological weapons to military units. The Iraqi military holds artillery and missile systems at Corps level throughout the Armed Forces and conducts regular training with them. The Directorate of Rocket Forces has operational control of strategic missile systems and some Multiple Rocket Launcher Systems.

Chemical and biological weapons: summary

16. Intelligence confirms that Iraq has covert chemical and biological weapons programmes, in breach of UN Security Council Resolution 687 and has continued to produce chemical and biological agents. Iraq has:

- chemical and biological agents and weapons available, both from pre-Gulf War stocks and more recent production;

- the capability to produce the chemical agents sulphur mustard, tabun, sarin, cyclosarin, and VX capable of producing mass casualties;

- a biological agent production capability and can produce at least anthrax, botulinum toxin, aflatoxin and ricin. Iraq has also developed mobile facilities to produce biological agents.

- a variety of delivery means available;

- military forces, which maintain the capability to use these weapons, with command, control and logistical arrangements in place.

NUCLEAR WEAPONS

JIC Assessments: 1999-2002
17. Since 1998 the JIC has monitored Iraq’s attempts to reconstitute its nuclear weapons programme. In mid-2001 the JIC assessed that Iraq had continued its nuclear research after 1991. The JIC drew attention to intelligence that Iraq had recalled its nuclear scientists to the programme in 1998. Since 1998 Iraq had been trying to procure items that could be for use in the construction of centrifuges for the enrichment of uranium.

18. In early 2002, the JIC assessed that sanctions were hindering the import of crucial goods for the production of fissile material. If sanctions continued, Iraq would not be able to indigenously to produce a nuclear weapon. If they were removed or became ineffective, it would take Iraq at least five years to produce a weapon. This timescale would shorten if Iraq succeeded in obtaining fissile material from abroad.

**Nuclear weapons - why are they difficult to make?**

A nuclear warhead requires sophisticated science and engineering, complex calculations and meticulous experimentation to convert the simplistic concepts seen in textbooks into a reliable bomb or missile warhead. Many of the hundreds of finely-engineered, specialised components are unique and have to be individually developed, made and tested rigorously. The warhead needs to be designed and tested to withstand accelerations, temperatures, vibrations and weather, and finally fired, using inert materials in place of the nuclear core, to prove that it works. All this involves many dangerous nuclear and explosive materials which need specialised facilities and techniques to ensure safe handling and production.

**Iraqi Nuclear Weapons Expertise**

19. Although the IAEA dismantled the physical infrastructure (such as...) of Iraq’s nuclear weapons programme, Iraq retained, and retains, its experienced nuclear scientists and technicians, specialised in the production of fissile material and weapons design. They include

............... .............................................................. It also retains the accompanying programme documentation and data, which was withheld from the inspectors.

**Gas Centrifuge Uranium Enrichment**

Uranium in the form of uranium hexafluoride is separated into its different isotopes in rapidly spinning-rotor tubes of special centrifuges. Many hundreds or thousands of centrifuges are connected in cascades to enrich uranium. If the lighter U235 isotope is enriched to more than 90% it can be used in the core of a nuclear weapon.

20. Intelligence shows that the present Iraqi programme is almost certainly based on gas centrifuge uranium enrichment, one of the routes Iraq was following for producing fissile material before the Gulf War. But Iraq needs certain key equipment, such as gas centrifuge components, and materials for the production of the fissile material necessary before a nuclear bomb could be developed.
21. Following the expulsion of weapons inspectors in 1998 there has been an accumulation of intelligence indicating that Iraq is making concerted covert efforts to acquire dual-use technology and materials with nuclear applications. Iraq's existing holdings of processed uranium are under IAEA supervision. But there is compelling evidence that Iraq has sought the supply of significant quantities of uranium from Africa. Iraqi has no known civil nuclear programme or nuclear power plants, therefore it has no legitimate reason to acquire uranium.

22. Other important procurement since 1998 includes attempts to purchase vacuum pumps, which could be used....an entire magnet production line of the correct specification for use in gas centrifuges, one large filament winding machine, which.....and a large balancing machine which could be used in initial centrifuge balancing work. Of particular concern are the repeated attempts by Iraq covertly to acquire a very large quantity (60,000 pieces) of specialised aluminium tubes. The specialised aluminium in question is subject to international export controls because of its potential application in the construction of gas centrifuges used to enrich uranium. In the case of aluminium and magnets it appears from intelligence that Iraq is attempting to acquire a capability to produce these components on its own rather than rely on foreign procurement.

Nuclear weapons: timelines
23. The projected timeline contained in the JIC assessment of early 2002 (see paragraph...) for Iraq to acquire a nuclear weapon through indigenous production of fissile material depend on a number of variables including the effectiveness of sanctions and other export controls and Iraqi success (or otherwise) to date in procuring items such as those listed above.

24. The continuing existence of the specialist teams and back-up data means that, were Iraq to obtain fissile material from abroad, the timeline would be much shorter. In those circumstances, and depending on the effectiveness of Iraqi weapons designs, we judge that Iraq could produce a nuclear weapon in between one and two years.

Radiological dispersal device
A Radiological Dispersal Device (RDD) is designed to cause injury, or to deny, access to an area through the dissemination of radioactive material. An RDD can be made using material from medical or industrial facilities, but makes an ineffective weapon. Very large amounts of highly radioactive material are required before an RDD will cause many fatalities or significant injuries.
Iraq experimented with radiological dispersal devices (RDDs) during 1987, using Zirconium-95 as a dispersal material for area denial. This programme never progressed beyond the research stage, and was dropped.

BALLISTIC MISSILES

JIC Assessment: 1999-2002

25. In mid-2001 the JIC drew attention to what it described as a "step-change" in progress on Iraqi missile programme over the previous two years. It was clear from intelligence that the range of Iraqi missiles which was permitted by the UN and supposedly limited to 150 kilometres was being extended and that work was under way on larger engines for longer-range missiles.

26. In early 2002 the JIC concluded that Iraq had begun to develop missiles with a range of over 1,000 kilometres. If sanctions remained in place the Iraqis would not be able to produce such a missile before 2007. Sanctions and the earlier work of the inspectors had caused significant problems for Iraqi missile development. In the previous six months Iraqi foreign procurement efforts for the missile programme had been bolder. The JIC also assessed that Iraq retained up to 20 Al Hussein missiles from before the Gulf War.

The Iraqi ballistic missile programme since 1998

27. Since the Gulf War, Iraq has been openly developing two short-range missiles up to a range of 150km, which are permitted under UN Security Council Resolution 687. The Al-Samoud liquid propellant missile has been extensively tested and is being deployed to military units. Intelligence indicates that at least fifty have been produced. Intelligence also indicates that Iraq has worked on extending its range to at least 200km in breach of UN Security Resolution 687. Production of the solid propellant Ababil-100 (Figure 4) is also underway, probably as an unguided rocket at this stage. There are also plans to extend its range to at least 200km.
Compared to liquid propellant missiles, those powered by solid propellant offer greater ease of storage, handling and mobility. They are also quicker to take into and out of action and can stay at a high state of readiness for longer periods.

28. **According to intelligence**, Iraq has retained up to 20 Al Hussein missiles (Figure 5), in breach of UN Security Council Resolution 687. These missiles were either hidden from the UN as complete systems, or re-assembled using illegally retained engines and other components. We judge that the engineering expertise available would allow these missiles to be maintained effectively, although the fact that at least some require re-assembly makes it difficult to judge exactly how many could be available for use. They could be used with conventional, chemical or biological warheads and, with a range of up to 650km, are capable of reaching a number of countries in the region including Cyprus, Turkey, Saudi Arabia, Iran and Israel.

29. **Intelligence has confirmed** that Iraq wants to extend the range of its missile systems to over 1000km, enabling it to threaten other regional neighbours. This work began in 1998, although efforts to regenerate the long range ballistic missile programme probably began in 1995. Iraq’s missile programmes employ hundreds of people. **Satellite imagery** (Figure 6) has shown a new engine test stand being constructed (A), which is larger than the current one used for Al Samoud (B), and that formerly used for testing SCUD engines (C) which was dismantled under UNSCOM supervision. This new stand will be capable of testing engines for missiles with ranges over 1000km, which are not permitted under UN Security Council Resolution 687. Such a facility would not be needed for systems that fall within the UN permitted range of 150km. The Iraqis have recently taken measures to conceal activities at this site.
Iraq is also working to obtain improved guidance technology to increase missile accuracy.

30. The success of UN restrictions means the development of new longer-range missiles is likely to be a slow process. These restrictions impact particularly on the:

- availability of foreign expertise,
- conduct of test flights to ranges above 150km;
- acquisition of guidance and control technology.
Saddam remains committed to developing longer-range missiles. Even if sanctions remain effective, Iraq might achieve a missile capability of over 1000km within 5 years (Figure 4 shows the range of Iraq's various missiles).

31. Iraq has managed to rebuild much of the missile production infrastructure destroyed in the Gulf War and in Operation Desert Fox in 1998 (see Part 2). New missile-related infrastructure is also under construction. Some aspects of this, including rocket propellant mixing and casting facilities at the Al Mamoun Plant, appear to replicate those linked to the prohibited BADR-2000 programme (with a planned range of 700-1000km) which were destroyed in the Gulf War or dismantled by UNSCOM. A new plant at al-Mamoun for indigenously producing ammonium perchlorate, which is a key ingredient in the production of solid propellant rocket motors, has also been constructed. This has been provided illicitly by NEC Engineers Private Limited, an Indian chemical engineering firm with extensive links in Iraq, including to other suspect facilities such as the Fallujah 2 chlorine plant. After an extensive investigation, the Indian authorities have recently suspended its export licence, although affiliated individuals and companies in the Middle East are still illicitly procuring for Iraq.

32. Despite a UN embargo, Iraq has also made concerted efforts to acquire additional production technology, including machine tools and raw materials, in breach of UN Security Council Resolution 1051. The embargo has succeeded in blocking many of these attempts, such as requests to buy magnesium powder and ammonium chloride. But, despite the dual use nature of some of the items, we know from intelligence that some items have found their way to the Iraqi ballistic missile programme. More will inevitably continue to do so. Intelligence makes it clear that Iraqi procurement agents and front companies in third countries are seeking illicitly to acquire propellant chemicals for Iraq's ballistic missiles. This includes production level quantities of near complete sets of solid propellant motor ingredients such as aluminium powder, ammonium perchlorate and hydroxyl terminated polybutadiene. There have also been attempts to acquire large quantities of liquid propellant chemicals such as unsymmetrical dimethylhydrazine (UDMH) and diethylenetriamine. We judge this is intended to support production and deployment of the Al Samoud and Ababil-100 and development of longer range systems.
33. The UN has sought to restrict Iraq's ability to generate funds for its chemical, biological and other military programmes. For example, Iraq earns money legally under the UN Oil For Food Programme (OFF) established by UNSCR 986, whereby the proceeds of oil sold through the UN is used to buy humanitarian supplies for Iraq. This money remains under UN control, and cannot be used for military procurement. However, the Iraqi regime continues to generate income outside UN control, either in the form of hard currency, or barter goods (which in turn means existing Iraqi funds are freed up to be spent on other things). Iraq's illicit earnings amounted to around USD 3 billion during 2001. Compared to $...in 2002 and $....in 1998 we assess that Iraq will generate up to a further USD 3 billion during 2002.

34. These illicit earnings go to the Iraqi regime. They are used for building new palaces, as well as purchasing luxury goods and other civilian goods outside OFF. Some of these funds are also
used by Saddam to maintain his armed forces, and to develop or acquire military equipment, including for chemical, biological and nuclear programmes. There is no indication as to what proportion of these funds may be used in this fashion. But we have seen no evidence that Iraqi attempts to develop its weapons of mass destruction and its ballistic missile programme, for example through covert procurement of equipment from abroad has been inhibited in any way by lack of funds. The steady increase over the last.....years in the availability of funds will enable Saddam to progress the programmes at a faster rate.
PART 2

HISTORY OF UN WEAPONS INSPECTIONS

1. During the 1990s, beginning in April 1991 immediately after the end of the Gulf War, the UN Security Council passed a series of resolutions [see box] establishing the authority of UNSCOM and the IAEA to carry out the work of dismantling Iraq's arsenal of chemical, biological and nuclear weapons programmes and long range ballistic missiles.

UN Security Council Resolutions (UNSCR) relating to WMD
UNSCR 687, April 1991 created the UN Special Commission (UNSCOM) and required Iraq to accept, unconditionally, "the destruction, removal or rendering harmless, under international supervision" of its chemical and biological weapons, ballistic missiles with a range greater than 150km, and their associated programmes, stocks, components, research and facilities. The International Atomic Energy Agency (IAEA) was charged with abolition of Iraq's nuclear weapons programme. UNSCOM and the IAEA must report that their mission has been achieved before the Security Council can end sanctions. They have not yet done so.

UNSCR 707, August 1991, stated that Iraq must provide full, final and complete disclosure of all its WMD programmes and provide unconditional and unrestricted access to UN inspectors. For over a decade Iraq has been in breach of this resolution. Iraq must also cease all nuclear activities of any kind other than civil use of isotopes.

UNSCR 715, October 1991 approved plans prepared by UNSCOM and IAEA for the ongoing monitoring and verification (OMV) arrangements to implement UNSCR 687. Iraq did not accede to this to November 1993. OMV was conducted from April 1995 to 15 December 1998, when the UN left Iraq.

UNSCR 1051, March 1996 stated that Iraq must declare the shipment of dual-use WMD goods.

These resolutions were passed under Chapter VII of the UN Charter which authorises the use of military force to enforce them.

2. As outlined in UNSCR 687, Iraq's chemical, biological and nuclear weapons programmes were also a breach of Iraq's commitments under:
• The Geneva Convention of 1925 – which bans the use of chemical weapons;

• the Biological and Toxin Weapons Convention – which bans the development, production, stockpiling, acquisition or retention of biological weapons;

• and the Nuclear Non-Proliferation Treaty (NPT) – which prohibits Iraq from manufacturing or otherwise acquiring nuclear weapons

3. UNSCR 687 obliged Iraq to provide declarations on all aspects of its WMD programmes within 15 days and accept the destruction, removal or rendering harmless under international supervision of its chemical, biological and nuclear programmes, and all ballistic missiles with a range beyond 150 km. Iraq did not make a satisfactory declaration within the specified timeframe.

Iraq accepted the UNSCRs and agreed to co-operate with UNSCOM. The history of the UN weapons inspections was characterised by persistent Iraqi obstruction.

Iraqi Non-Co-operation with the Inspectors

4. The former Chairman of UNSCOM, Richard Butler, reported to the UN Security Council in January 1999, that in 1991 a decision was taken by a high-level Government committee to provide inspectors with only a portion of its proscribed weapons, components, production capabilities and stocks. UNSCOM concluded that Iraqi policy was based on the following actions:

• to provide only a portion of extant weapons stocks, releasing for destruction only those that were least modern;
to retain the production capability and documentation necessary to revive programmes when possible,

to conceal the full extent of its chemical weapons programme, including the VX nerve agent project; to conceal the number and type of chemical and biological warheads for proscribed long-range missiles;

and to conceal the existence of its massive biological weapons programme.

5. In December 1997 Richard Butler reported to the UN Security Council that Iraq had created a new category of sites – “Presidential” and “sovereign” – from which it claimed that UNSCOM inspectors would henceforth be barred. The terms of the ceasefire in 1991 foresaw no such limitation. However, Iraq consistently refused to allow UNSCOM inspectors access to any of these eight Presidential sites. Many of these so-called “palaces” are in fact large compounds which are an integral part of Iraqi counter-measures designed to hide weapons material (see photograph).
A photograph of a presidential site or what have been called "palaces".

Buckingham Palace and grounds

Buckingham palace has been superimposed to demonstrate their comparative size.
Intimidation

6. Once inspectors had arrived in Iraq, it quickly became apparent that the Iraqi's would resort to a range of measures (including physical threats and psychological intimidation of inspectors) to prevent UNSCOM and the IAEA from fulfilling their mandate.

7. In response to such incidents, the President of the Security Council issued frequent statements calling on Iraq to comply with its disarmament and monitoring obligations.

<table>
<thead>
<tr>
<th>Iraqi obstruction of UN weapons inspection teams.</th>
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<tr>
<td>• firing warning shots in the air to prevent IAEA inspectors from intercepting nuclear related equipment (June 1991),</td>
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<td>• keeping IAEA inspectors in a car park for 4 days and refusing to allow them to leave with incriminating documents on Iraq's nuclear weapons programme (September 1991),</td>
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<td>• announcing that UN monitoring and verification plans were “unlawful” (October 1991),</td>
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<tr>
<td>• refusing UNSCOM inspectors access to the Ministry of Agriculture. Threats were made to inspectors who remained on watch outside the building. The inspection team had reliable evidence that the site contained archives related to proscribed activities;</td>
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<tr>
<td>• refusing to allow UNSCOM the use of its own aircraft to fly into Iraq (January 1993). In 1991-2 Iraq objected to UNSCOM using its own helicopters and choosing its own flight plans,</td>
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<tr>
<td>• refusing to allow UNSCOM to install remote-controlled monitoring cameras at two key missile sites (June-July 1993);</td>
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<td>• repeatedly denying access to inspection teams (1991- December 1998);</td>
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<tr>
<td>• interfering with UNSCOM’s helicopter operations, threatening the safety of the aircraft and their crews (June 1997);</td>
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<tr>
<td>• demanding end of U2 overflights and the withdrawal of US UNSCOM staff (October 1997);</td>
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<tr>
<td>• destroying documentary evidence of WMD programmes (September 1997).</td>
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Obstruction

8. Iraq denied that it had pursued a biological weapons programme until July 1995.
In July 1995, Iraq acknowledged that biological agents had been produced on an industrial scale at Al-Hakam. Following the defection in August 1995 of Hussein Kamel, Saddam's son-in-law and former Director of the Military Industrialisation Commission, Iraq released over 2 million documents relating to its WMD programmes and acknowledged that it had pursued a biological programme that led to the deployment of actual weapons. Iraq admitted producing in excess of 200 biological weapons with a reserve of agent to fill considerably more.

9. Iraq tried to obstruct UNSCOM's efforts to investigate the scale of its biological

Inspection of Iraq's biological weapons programme

In the course of the first biological weapons inspection in August 1991, Iraq claimed that it had merely conducted a military biological research programme. At the site visited, Al-Salman, Iraq had removed equipment, documents and even entire buildings. Later in the year, during a visit to the Al-Hakam site, Iraq declared to UNSCOM inspectors that the facility was used as a factory to produce proteins derived from yeast to feed animals. Inspectors subsequently discovered that the plant was a central site for the production of anthrax spores and botulinum toxin for weapons. The factory had also been sanitised by Iraqi officials to deceive inspectors.

Another key site, the Foot and Mouth Disease Vaccine Institute at Daura which produced botulinum toxin and probably anthrax, was not divulged as part of the programme. Five years later, after intense pressure, Iraq acknowledged that tens of tonnes of bacteriological warfare agent had been produced there and at Al-Hakam. Amazingly, Iraq continued to develop the Al-Hakam site into the 1990s, misleading UNSCOM about its true purpose.

As documents recovered in August 1995 were assessed, it became apparent that the full disclosure required by the UN was far from complete. Successive inspection teams went to Iraq to try to gain greater understanding of the programme and to obtain credible supporting evidence. In July 1996 Iraq refused to discuss its past programme and doctrine forcing the team to withdraw in protest. Monitoring teams were at the same time finding undisclosed equipment and materials associated with the past programme. In response, Iraq grudgingly provided successive disclosures of their programme which were judged by UNSCOM, and specially convened international panels, to be technically inadequate.

In late 1995, Iraq acknowledged weapons testing the biological agent ricin, but did not provide production information. Two years later — in early 1997 — UNSCOM discovered evidence that Iraq had produced ricin. It created forged documents to account for bacterial growth media, imported in the late 1980s, specifically for the production of anthrax, botulinum toxin and probably plague. The documents were created to indicate that the material had been imported by the State Company for Drugs and Medical
Appliances Marketing for use in hospitals and distribution to local authorities. Iraq also censored documents and scientific papers provided to the first UN inspection team, removing all references to key individuals, weapons and industrial production of agents.

10. Iraq has yet to provide any documents concerning production of agent and subsequent weaponisation. Iraq destroyed, unilaterally and illegally, some biological weapons in 1991 and 1992 making accounting for these weapons impossible. In addition Iraq cleansed a key site at Al-Muthanna - its main research and development, production and weaponisation facility for chemical warfare agents - of all evidence of a biological programme in the toxicology department, the animal-house and weapons filling station.

11. Iraq refused to elaborate further on the programme during inspections in 1997 and 1998, confining discussion to previous topics. In July 1998, Tariq Aziz personally intervened in the inspection process stating that the biological programme was more secret and more closed than other WMD programmes. He also played down the significance of the programme. Iraq has presented the biological weapons programme as the personal undertaking of a few misguided scientists.

12. At the same time, Iraq tried to maintain its nuclear weapons programme via a concerted campaign to deceive IAEA inspectors. In 1997 the Agency’s Director General stated that the IAEA was “severely hampered by Iraq’s persistence in a policy of concealment and understatement of the programme’s scope.”

Achievements

13. Despite the conduct of the Iraqi authorities towards them, both UNSCOM and the IAEA Action Team have valuable records of achievement in discovering and exposing Iraq’s biological weapons programme and destroying very large quantities of chemical weapons stocks, missiles as well as the infrastructure for Iraq’s nuclear weapons programme.
### UNSCOM and IAEA Achievements

UNSCOM surveyed 1015 sites in Iraq, carrying out 272 separate inspections. Despite Iraqi obstruction and intimidation, UN inspectors uncovered details of chemical, biological, nuclear and ballistic missile programmes. One of the main discoveries was that at the time of the Gulf War, Iraq had been within 3 years of acquiring a nuclear weapon. Other major UNSCOM/IAEA achievements included:

- the destruction of 40,000 munitions for chemical weapons, 2,610 tonnes of chemical precursors and 411 tonnes of chemical warfare agent;
- the dismantling of Iraq's prime chemical weapons development and production complex at Al-Muthanna, and a range of key production equipment;
- the destruction of 48-SCUD type missiles, 11 mobile launchers and 56 sites, 30 warheads filled with chemical agents, and 20 conventional warheads;
- the destruction of the Al-Hakam biological weapons facility and a range of production equipment, seed stocks and growth media for biological weapons;
- the discovery in 1991 of 15 kg of highly enriched uranium, forcing Iraq's acknowledgement of uranium enrichment programmes and attempts to preserve key components of its prohibited nuclear weapons programme; and
- the removal and destruction of the infrastructure for the nuclear weapons programme, including the Al-Athir weaponisation/testing facility.

### 14. Despite UNSCOM's efforts, following the effective ejection of UN inspectors in December 1998, there remained a series of significant unresolved disarmament issues.

In summarising the situation in a report to the Security Council, the UNSCOM Chairman, Richard Butler indicated that:

- contrary to the requirement that destruction be conducted under international supervision, "Iraq undertook extensive, unilateral and secret destruction of large quantities of proscribed weapons and items";
- and Iraq "also pursued a practice of concealment of proscribed items, including weapons, and a cover up of its activities in contravention of Council resolutions."
Overall, Butler declared that obstructive Iraqi activity had had "a significant impact upon the Commission’s disarmament work."

Withdrawal of the Inspectors

15. By the end of 1998 UNSCOM was in direct confrontation with the Iraqi Government which was refusing to co-operate. The US and the UK had made clear that anything short of full co-operation would make military action unavoidable. Richard Butler was requested to report to the UN Security Council in December 1998 and stated that, following a series of direct confrontations, coupled with the systematic refusal by Iraq to co-operate, UNSCOM was no longer able to perform its disarmament mandate. As a direct result, on December 16 the weapons inspectors were withdrawn and Operation Desert Fox was launched by the US and the UK a few hours afterwards.

Operation Desert Fox (16-19 December 1998):

Operation Desert Fox targeted industrial facilities related to Iraq's ballistic missile programme and a suspect biological warfare facility as well as military airfields and sites used by Iraq's security organisations which are involved in its weapons of mass destruction programmes. Key facilities associated with Saddam's Ballistic Missile programme were significantly degraded.

The Situation Since 1998

16. There have been no UN-mandated weapons inspections in Iraq since 1998. In an effort to enforce Iraqi compliance with its disarmament and monitoring obligations, the Security Council passed resolution 1284 in December 1999. This established the United Nations Monitoring, Verification and Inspection Commission (UNMOVIC) as a successor organisation to UNSCOM and called on Iraq to give UNMOVIC inspectors "immediate, unconditional and unrestricted access to any and all areas, facilities, equipment, records and means of transport". It also set out the steps Iraq needed to take to in return for the eventual suspension and lifting of sanctions. A key measure of Iraqi compliance would be full co-operation with UN inspectors, including unconditional, immediate and unrestricted access to any and all sites.
Given Iraq's track record of co-operation with UNSCOM and the IAEA between 1991-98, it is difficult to conclude other than that the prospects of Iraq meeting this standard are dim.

17. For the past three years, Iraq has allowed the IAEA to carry out an annual inspection of a stockpile of low-enriched uranium. This has led some countries and western commentators to conclude -- erroneously -- that Iraq is meeting its nuclear disarmament and monitoring obligations. As the IAEA has pointed out in recent weeks, this annual inspection does "not serve as a substitute for the verification activities required by the relevant resolutions of the UN Security Council."

18. Dr. Hans Blix, the Executive Chairman of UNMOVIC, and Dr. Mohammed El-Baradei, the Director General of the IAEA, have declared that in the absence of inspections it is impossible to verify Iraqi compliance with its UN disarmament and monitoring obligations. In April 1999, an independent UN panel of experts noted that "the longer inspection and monitoring activities remain suspended, the more difficult the comprehensive implementation of Security Council resolutions becomes, increasing the risk that Iraq might reconstitute its proscribed weapons programmes."

19. The departure of the Inspectors greatly diminished our ability to monitor and assess Iraq's continuing attempts to reconstitute its chemical, biological, nuclear and ballistic missile programmes.
PART 3

IRAQ UNDER SADDAM

Introduction

1. The Republic of Iraq is bounded by Turkey, Iran, Kuwait, Saudia Arabia, Jordan, Syria and the Persian Gulf. Its population of around 23 million is ethnically and religiously diverse. Approximately 77% are Arabs. Sunni Muslims form around 17% of the Arab population and dominate the government. About 60% of Iraqis are Shias and 20% are Kurds. The remaining 3% of the population consists of Turkomans, Armenians, Assyrians, Christians and Jews.

2. Public life in Iraq is nominally dominated by the Ba’ath Party (see box on next page). But all real authority rests with Saddam Hussein and his immediate circle. Saddam’s family, tribe and a small number of associates remain his most loyal supporters. He uses them to convey his orders, including to members of the government.

3. Saddam Hussein uses patronage and violence to

Saddam’s rise to power

Saddam Hussein was born in 1937 in the Tikrit district, north of Baghdad. In 1957 he joined the Ba’ath Party. After taking part in a failed attempt to assassinate the Iraqi President, Abdul Karim Qasim, Saddam escaped, first to Syria and then to Egypt. In his absence he was sentenced to 15 years imprisonment.

Saddam returned to Baghdad in 1963 when the Ba’ath Party came to power. He went into hiding after the Ba’ath fell from power later that year. He was captured and imprisoned, but in 1967 escaped and took over responsibility for Ba’ath security. Saddam set about imposing his will on the Party and establishing himself at the centre of power.

The Ba’ath Party returned to power in 1968. In 1969 Saddam became Vice Chairman of the Revolutionary Command Council, Deputy to the President, and Deputy Secretary-General of the Regional Command of the Ba’ath. In 1970 he joined the Party’s National Command and in 1977 was elected Assistant Secretary General. In July 1979, he took over the Presidency of Iraq. Within days, five fellow members of the Revolutionary Command Council were accused of involvement in a coup attempt. They and 17 others were summarily executed.
motivate his supporters and to control or eliminate opposition. Potential rewards include social status, money and better access to goods. Saddam's extensive security apparatus and Ba'ath Party network provides oversight of Iraqi society, with informants in social, government and military organisations. Saddam practises torture, execution and other forms of coercion against his enemies, real or suspected. His targets are not only those who have offended him, but also their families, friends or colleagues.

4. Saddam acts to ensure that no other centres of power in Iraq. He has crushed parties and tribes which might try to assert themselves, such as the communists and the Kurds. Members of the opposition abroad have been the targets of assassination attempts conducted by Iraqi security services.

Internal Repression – the Kurds and the Shias

5. Saddam has pursued a long-term programme of persecution of the Iraqi Kurds, including the use of chemical weapons. During the Iran/Iraq war, Saddam appointed his cousin, Ali Hassan al-Majid, as his deputy in the north. In 1987-88, al-Majid led the "Anfal" campaign of attacks on Kurdish villages. Amnesty

The Iraqi Ba'ath Party

The Ba'ath Party is the only legal political party in Iraq. It pervades all aspects of Iraqi life. Membership, around 700,000, is necessary for self advancement and confers benefits from the regime.

Saddam's security apparatus

Saddam relies on a long list of security organisations with overlapping responsibilities. The main ones are:

- The Special Security Organisation oversees Saddam's security and monitors the loyalty of other security services. Its recruits are predominantly from Tikrit.
- The Special Republican Guard is equipped with the best available military equipment. Its members are selected on the basis of loyalty to the regime.
- The Directorate of General Security is primarily responsible for counteracting threats from the civilian population.
- The Directorate of General Intelligence monitors and suppresses dissident activities at home and abroad.
- The Directorate of Military Intelligence's role includes the investigation of military personnel.
- The Saddam Fidayeen, under the control of Udayy Hussein, has been used to deal with civil disturbances.
International estimates that more than 100,000 Kurds were killed or disappeared during this period.

6. After the Gulf War in 1991 Kurds in the north of Iraq rose up against Baghdad’s rule. In response the Iraqi regime killed or imprisoned thousands, prompting a humanitarian crisis. Over a million Kurds fled into the mountains and tried to escape Iraq.

7. Persecution of Iraq’s Kurds continues, although the protection provided by the northern No-Fly Zone has helped to curb the worst excesses. But outside this zone, the Baghdad regime has continued a policy of persecution and intimidation.

8. The regime has used chemical weapons against the Kurds, most notably in an attack on the city of Halabja in 1988. The implicit threat of the use of CW against the Kurds and others is an important part of Saddam’s attempt to keep the civilian population under control.

9. The regime has tried to displace the traditional Kurdish and Turkoman populations of the areas under its control, primarily in order to weaken Kurdish claims to the oil-rich area around the northern city of Kirkuk. Kurds and other non-Arabs are forcibly ejected to the three northern Iraqi governorates – Dohuk, Arbil and Sulaimaniyah – which are under de facto Kurdish control. According to the United Nations Commission on Human Rights (UNCHR) Special Rapporteur for Iraq, 94,000 individuals have been expelled since 1991. Agricultural land owned by Kurds has been confiscated and

Repression and control: some examples

- A campaign of mass arrests and killing of Shia activists led to the execution of the Ayatollah Baqir al-Sadr and his sister in April 1980.
- In 1983, 80 members of another leading Shia family were arrested. Six of them, all religious leaders, were executed.
- A massive chemical weapons attack on Kurds in Halabja town in 1988, killing 5000 and injuring 10000 more.
- A large number of officers from the Jabbur tribe were executed in the early 1990s for the alleged disloyalty of a few of them.
redistributed to Iraqi Arabs. Arabs from southern Iraq have been offered incentives to move into the Kirkuk area.

10. After the 1979 revolution that ousted the Shah in Iran, Saddam intensified a campaign against the Shia Muslim majority of Iraq, fearing that they might be encouraged by the new Shia regime.

11. In the wake of the Gulf War, riots broke out in the southern city of Basra on 1 March 1991, spreading quickly to other cities in Shia-dominated southern Iraq. The regime responded by killing thousands. Many Shia tried to escape to Iran and Saudi Arabia.

12. Some of the Shia hostile to the regime sought refuge in the marsh land of southern Iraq. In order to subjugate the area, Saddam embarked on a large-scale programme to drain the marshes to allow Iraqi ground forces to eliminate all opposition there. The rural population of the area fled or were forced to move to southern cities.

Human rights abuses – further examples
• About 2500 prisoners were executed between 1997 and 1999 in a "prison cleansing" campaign.
• 3000 prisoners were executed at the Mahjar Prison between 1993 and 1998.
• 4000 prisoners were executed at Abu Ghraib Prison in 1984.
• Prisoners are executed by machine gun.
• In October 2000, dozens of women accused of prostitution were beheaded without any judicial process. Some were accused for political reasons.
• Women prisoners at Mahjar are routinely raped by their guards.
• Prisoners at the Qurtiyya Prison in Baghdad and elsewhere are kept in metal boxes the size of tea chests. If they do not confess they are left to die.
13. Human rights abuses continue. People continue to be arrested and detained on suspicion of political or religious activities, or often because they are related to members of the opposition. Executions are carried out without due process of law. Relatives are often prevented from burying the victims in accordance with Islamic practice. Thousands of prisoners have been executed.

Human Rights – mistreatment in Abu Ghraib Prison

Abdallah, a member of the Ba’ath Party whose loyalty became suspect was imprisoned for four years at Abu Ghraib in the 1980s. On the second day of his imprisonment, the men were forced to walk between two rows of five guards each to receive their containers of food. While walking to get the food, they were beaten by the guards with plastic telephone cables. They had to return to their cells the same way, so that a walk to get breakfast resulted in twenty lashes. According to Abdallah, “It wasn’t that bad going to get the food, but coming back the food was spilled when we were beaten.” The same procedure was used when the men went to the bathroom. On the third day, the torture continued. “We were removed from our cells and beaten with plastic pipes. This surprised us, because we were asked no question. Possibly it was being done to break our morale”, Abdallah speculated. The torture escalated to sixteen sessions daily.

The treatment was organised and systematic. Abdallah was held alone in a 3x2-meter room that opened onto a corridor. “We were allowed to go to the toilet three times a day, then they reduced the toilet to once a day for only one minute. I went for four years without a shower or a wash”, Abdallah said. He also learned to cope with the deprivation and the hunger that accompanied his detention: “I taught myself to drink a minimum amount of water because there was no place to urinate. They used wooden sticks to beat us and sometimes the sticks would break. I found a piece of a stick, covered with blood, and managed to bring it back to my room. I ate it for three days. A person who is hungry can eat anything. Pieces of our bodies started falling off from the beatings and our skin was so dry that it began to fall off. I ate pieces of my own body “No one, not Pushkin, not Mahfouz, can describe what happened to us. It is impossible to describe what living this day to day was like. I was totally naked the entire time. Half of the original groups [of about thirty men] died. It was a slow type of continuous physical and psychological torture. Sometimes, it seemed that orders came to kill one of us, and he would be beaten to death”.

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14. Saddam has issued a series of decrees establishing severe penalties for criminal offences. These include amputation, branding, cutting off ears, and other forms of mutilation. Anyone found guilty of slandering the President has their tongue removed.

Saddam’s family
15. Saddam’s son Udayy maintained a private torture chamber known as the Red Room in a building on the banks of the Tigris disguised as an electricity installation. He ordered the Iraq football team to be caned on the soles of the feet for losing a World Cup match. He created a militia in 1994 which has used swords to execute victims outside their own homes. He has personally executed dissidents, for instance in the Shia uprising at Basra which followed the Gulf War.
16. Members of Saddam’s family are also subject to persecution. A cousin of Saddam called Ala Abd Al-Qadir Al-Majid fled to Jordan from Iraq, citing disagreements with the regime over business matters. He returned to Iraq after the Iraqi Ambassador in Jordan declared publicly that his life was not in danger. He was met at the border by Tahir Habbush, Head of the Iraqi Intelligence Service (the Mukhabarat), and taken to a farm owned by ‘Ali Hasan Al-Majid. At the farm ‘Ala was tied to a tree and executed by members of his immediate family who, following orders from Saddam, took it in turns to shoot him.

17. Some 40 of Saddam’s relatives, including women and children, have been killed. In February 1996, his sons-in-law Hussein Kamel and Saddam Kamel were executed. They had defected in 1995 and returned to Iraq from Jordan after the government had announced amnesties for them.

**Human Rights - Individual testimony**

In December 1996, a Kurdish businessman from Baghdad was arrested outside his house by plainclothes security men. Initially his family did not know his whereabouts and went from one police station to another inquiring about him. Then they found out that he was being held in the headquarters of the General Security Directorate in Baghdad. The family was not allowed to visit him. Eleven months later the family was told by the authorities that he had been executed and that they should go and collect his body. His body bore evident signs of torture. His eyes were gouged out and the empty eye sockets filled with paper. His right wrist and left leg were broken. The family was not given any reason for his arrest and subsequent execution. However, they suspected that he was executed because of his friendship with a retired army general who had links with the Iraqi opposition outside the country and who was arrested just before his arrest and also executed.
**Saddam’s Wars**

18. As well as ensuring his absolute control inside Iraq, Saddam has tried to make Iraq the dominant power of the region. In pursuit of these objectives he has led Iraq into two wars of aggression against neighbours, the Iran-Iraq war and the invasion of Kuwait.

19. With the fall of the Shah in Iran in 1979, relations between Iran and Iraq deteriorated sharply. In September 1980 Saddam renounced a border treaty he had agreed with Iran in 1975 ceding half of the Shatt al-Arab waterway to Iran. Shortly thereafter, Saddam launched a large-scale invasion of Iran. He believed that he could take advantage of the state of weakness, isolation and disorganisation he perceived in post-revolutionary Iran. He aimed to seize territory, including that ceded to Iran a few years earlier, and to assert Iraq’s position as a leader of the Arab world. Saddam expected it to be a short, sharp campaign. But the conflict lasted for eight years.

20. It is estimated that the Iran/Iraq war cost the two sides a million casualties. Iraq used chemical weapons. Some twenty thousand Iranians were killed by mustard gas, and the nerve agents tabun and sarin, all of which Iraq still possesses. Iraq also fired over 500 ballistic missiles at Iranian targets, including major cities.

21. The cost of the war ran into hundreds of billions of dollars for both sides. Iraq gained nothing. After the war ended, Saddam resumed his previous pursuit of primacy in the Gulf. His policies involved spending huge sums of money on new military equipment. But Iraq was burdened by debt incurred during the war and the price of oil, Iraq’s only major export, was low.

**Opposition to Saddam during the Iran/Iraq war**

During the war Saddam’s security apparatus ensured any internal dissent or opposition was quickly eliminated. In 1982 he quickly purged a group within Iraq’s ruling clique which suggested that the war might be brought to an end more quickly if Saddam stood down.
22. By 1990 Iraq's financial problems were severe. Saddam looked at ways to press
the oil-producing states of the Gulf to force up the price of crude oil by limiting
production and waive the $40 billion that they had loaned Iraq during its war with
Iran. Kuwait had made some concessions over production ceilings. But Saddam
blamed Kuwait for over production. When his threats and blandishments failed, Iraq
invaded Kuwait on 2 August 1990. He believed that occupying Kuwait could prove
profitable.

23. Saddam also sought to justify the conquest of Kuwait on other grounds. Like other
Iraqi leaders before him, he claimed that, as Kuwait's rulers had come under the
jurisdiction of the governors of Basra in the time of the Ottoman Empire, Kuwait
should belong to Iraq.

24. During its occupation of Kuwait, Iraq denied access to the Red Cross,
which has a mandate to provide
protection and assistance to civilians
affected by international armed conflict.
The death penalty was extended to
"crimes" such as looting and hoarding
food.

25. In an attempt to deter military
action to expel it from Kuwait, the Iraqi
regime took hostage several hundred foreign nationals (including children) in Iraq and
Kuwait, and prevented thousands more from leaving. Hostages were held as human
shields at a number of strategic military and civilian sites.

Abuses by Iraqi forces in Kuwait
- Robbery and rape of Kuwaitis and
  expatriates.
- Summary executions.
- People dragged from their homes and held
  in improvised detention centres.
- Amnesty International has listed 38 methods
  of torture used by the Iraqi occupiers. These
  included beatings, breaking of limbs, extracting
  finger and toenails, inserting
  bottle necks into the rectum, and subjecting
  detainees to mock executions.
- Kuwaiti civilians arrested for "crimes" such
  as wearing beards.
26. At the end of the Gulf War, the Iraqi army fleeing Kuwait set fire to over 1,160 Kuwaiti oil wells, with serious environmental consequences.

27. More than 600 Kuwaiti prisoners of war and missing persons are still unaccounted for. Iraq refuses to comply with its UN obligation to account for the missing. It has provided sufficient information to close only three case-files.