

JIC Assessment, 15 March 2002

THE STATUS OF IRAQI WMD PROGRAMMES

Key Judgements

- I. Iraq **retains up to 20 Al Hussein ballistic missiles**, produced prior to the Gulf War, with a range of 650km and capable of hitting Israel. The location and condition of these is unknown, but there is sufficient engineering expertise to make them operational.
- II. Iraq has begun development of **medium range ballistic missiles over 1000km** that could target countries throughout the Middle East and Gulf Region, but will **not be able to produce such a missile before 2007** provided sanctions remain effective.
- III. Iraq is **pursuing a nuclear weapons programme**. But it **will not be able to indigenously produce a nuclear weapon while sanctions remain** in place, unless suitable fissile material is purchased from abroad.
- IV. Iraq **may retain some stocks of chemical agents**. Following a decision to do so, Iraq could produce:
 - significant quantities of **mustard within weeks**;
 - significant quantities of **sarin and VX within months**, and in the case of VX may have already done so;
- V. Iraq currently **has available**, either from pre Gulf War stocks or more recent production, a number of **biological agents**. Iraq could produce more of these biological agents within days.
- VI. A decision to begin CBW production would probably go undetected.
- VII. Iraq can deliver CBW weapons by a variety of means including ballistic missiles. **Iraq's CBW production capability is designed to survive** a military attack and UN inspections.

THE STATUS OF IRAQI WMD PROGRAMMES

This paper was requested by the FCO to aid policy discussions on Iraq

1. **Intelligence** on Iraq's weapons of mass destruction (WMD) and ballistic missile programmes is **sporadic and patchy**. Iraq is also well practised in the art of deception, such as concealment and exaggeration. A complete picture of the various programmes is therefore difficult. But it is clear that Iraq continues to pursue a policy of acquiring WMD and their delivery means. Intelligence indicates that planning to reconstitute some of its programmes began in 1995. WMD programmes were then given a further boost in 1998 with the withdrawal of UNSCOM inspectors.

Ballistic Missiles

2. Iraq has rebuilt much of the military production infrastructure associated with the missile programme damaged in the Gulf War and the few high profile sites targeted in Operation Desert Fox in 1998. New infrastructure is being built, with a particular focus on improving the support to the solid propellant missile programme.

3. Since the Gulf War, Iraq has been openly developing **short-range ballistic missiles (SRBM)** up to a range of 150km, which are permitted under UN Security Council Resolution 687. Intelligence indicates that:

- the 150km range liquid propellant **Al Samoud** missile has been extensively flight-tested. Intelligence indicates that Iraq has produced at least 50 Al Samouds, including those test fired, and preparations are underway to deploy some of these to military units. Iraq has reportedly succeeded in developing a number of 200km range variants of Al Samoud, although it is unclear if these are for operational use or research and development for longer-range systems. A small number of transporter-erector-launchers (TELs) have been seen, although others may exist;
- the solid propellant **Ababil-100** has also been tested, and has reached ranges up to 150km. We judge that this system is likely to become operational as an SRBM within 2 years. It might enter service earlier as an artillery rocket. Intelligence indicates that Iraq has plans to extend the range of the Ababil-100 to 250km.

<p style="text-align: center;">Immediate missile capability</p> <p>We judge that Iraq has the following missiles available for immediate use:</p> <ul style="list-style-type: none">• some Al Samoud (up to 150km)• up to 20 Al Hussein (650km) <p>There are a limited number of launchers available. Both missiles could deliver basic chemical and biological warheads.</p> <p>[...]</p>
--

4. We judge Iraq has also retained some **20 Al Hussein missiles** (650km range stretched SCUD), the type fired at Israel and Saudi Arabia during the Gulf War. We do not know the location of these missiles or their state of readiness, but judge that the engineering expertise available would allow these missiles to be effectively maintained.

5. Iraq is seeking to develop new, **larger liquid and solid propellant missiles**, contrary to UN limits. Recent intelligence indicates personnel associated with the Al Samoud programme have now been tasked to concentrate on designing liquid propellant systems with ranges of 2000-3000km. New intelligence indicates the main focus may be on the development of a SCUD derivative, which we judge has an intended range of around 1200km. Work on an engine for this system began in 1998, involving personnel who had been reviewing the details of previous Al Hussein production since 1995, although by the end of the year

2000 they were still experiencing technical problems. Additional personnel were probably assigned to other parts of the programme during 2000. A large static test stand capable of testing liquid propellant engines bigger than the SCUD engine has been under construction since mid-2000, probably in support of this programme. Work on large motor cases for longer-range solid propellant systems has been noted over the last 2-3 years. Providing sanctions remain effective, Iraq is **unlikely to be able to produce a longer-range missile before 2007**.

6. Despite retaining engineers with expertise in missile design and production, **UN sanctions and the work of the inspectors** have caused significant problems for Iraq's missile industry in acquiring components and production technology, in particular, for improving guidance and control systems and therefore missile accuracy. Iraq is actively seeking to procure materials for its missile programme, [...]

Chemical and Biological Warfare (CBW)

7. We continue to judge that Iraq has an offensive **chemical warfare (CW) programme**, although there is very little intelligence relating to it. From the evidence available to us, we believe Iraq retains some production equipment, and some small stocks of CW agent precursors, and may have hidden small quantities of agents and weapons. **Anomalies in Iraqi declarations to UNSCOM** suggest stocks could be much larger. Given the size and scope of Iraq's pre Gulf War programme, little or no research and development work would need to be carried out. Intelligence on production facilities is scarce; the reconstructed former precursor production facility near Habbaniyah in itself is insufficient to support large-scale CW agent production. Other industrial chemical facilities could be used in support of a chemical weapons programme, but we have no intelligence to suggest that they are currently being used in that role. Intelligence has indicated an Iraqi interest in transportable production facilities for chemical weapons, but these could produce only small amounts of agent and we judge it more likely that the mobile units are for filling munitions rather than producing agent. We assess that following a decision to do so, Iraq could produce:

- **Significant quantities of mustard within weeks**, using hidden stocks of precursors and with support from Iraq's chemical industry;
- **Significant quantities of nerve agent within months**, mainly sarin and VX. This would be heavily dependent on hidden stocks of precursors [...]. There has been one uncorroborated report that Iraq filled some artillery rocket munitions with VX in the period 1996-1998, and another that a team of chemists was formed in 1998 to produce 5 tons of VX. The source was told this had been completed by the end of 1998;
- Incapacitants including the mental incapacitant Agent 15.

<p style="text-align: center;">Immediate CBW capability</p> <p>The following chemical agents could be produced within weeks, if not already:</p> <ul style="list-style-type: none">• Mustard, sarin and VX; <p>The following biological agents could be produced within days, if not already:</p> <ul style="list-style-type: none">• Anthrax spores, botulinum toxin, aflatoxin and possibly plague <p>These could be delivered by a variety of means, including ballistic missiles and special forces.</p>

8. Iraq's military forces used chemical weapons during the Iran-Iraq War. Intelligence indicates command, control and logistical arrangements are in place.

9. Iraq was forced by UNSCOM discoveries and the defection of Hussein Kamil to admit to having had a **biological warfare (BW) programme** at the time of the Gulf War. BW work continued throughout the period of UNSCOM inspections and intelligence indicates that this programme continues. Key figures from the pre-Gulf War programme are reported to be involved. Research and development is assessed to continue under cover of a number of legitimate institutes and possibly in a number of covert facilities.

10. We judge that Iraq could produce significant quantities of BW agents within days of a decision to do so. There is no intelligence on any BW agent production facilities, but one source indicates that Iraq may have developed **mobile production facilities**. A liaison source reports that:

- the transportable production programme began in 1995;
- 6 road based facilities, on trailers, and 1 rail based facility, on railway carriages, were constructed and by March 1999; three were operational;
- the facilities were capable of making 5 different (unspecified/unknown) biological agents. Between November 1998 and March 1999 20-30 tons of BW agent was produced.

11. Though not corroborated, we judge the reporting is technically credible. [...]

12. We do not know which types of agents are produced by these facilities, but judge that **Iraq currently has available, either from pre Gulf War stocks or more recent production, anthrax spores, botulinum toxin, aflatoxin and possibly plague**. The continued operation of the castor oil extraction plant at the former Habbaniyah chemical weapons site may provide the base for producing ricin, although there is no evidence that Iraq is currently doing so. [...] Iraq's declarations to UNSCOM acknowledged that it worked on a number of other BW agents including agents which would incapacitate, rather than kill humans and on anti-crop and anti-livestock agents. Iraq almost certainly retains the capability to produce such agents. **Iraq is judged to be self-sufficient in the production of biological weapons.**

13. Iraq has a variety of **delivery means** available for both chemical and biological weapons, some of which are very basic. These include, free fall bombs, artillery shells, helicopter and aircraft borne sprayers and ballistic missile warheads, although the exact numbers are unknown. Iraq is also continuing with the L-29 remotely piloted vehicle programme, which could have chemical and biological weapons delivery applications. Covert delivery also remains an option. Because of the shortage of some platforms, such as aircraft and helicopters, we judge that Iraq would not be able to conduct a sustained CBW campaign in the manner of the Iran-Iraq War, even if Iraq could produce enough CBW agents to do so. But a single major attack or a number of small attacks would be feasible.

Nuclear Weapons Programme

14. We judge that Iraq **does not possess a nuclear weapons capability**. We previously assessed that Iraq was within three years of producing a weapon when the Gulf War intervened. Its programme was effectively dismantled by the IAEA and subject to the monitoring process subsequently installed. Although there is very little intelligence we continue to judge that Iraq is pursuing a nuclear weapons programme. We assess the programme to be based on gas centrifuge **uranium enrichment**, which was the route Iraq was following for producing fissile material prior to the Gulf War. Recent intelligence indicates that nuclear scientists were recalled to work on a nuclear programme in the autumn of 1998, but we do not know if large scale development work has yet recommenced. Procurement of dual-use items over the last few years

could be used in a uranium enrichment programme. There have been determined efforts to purchase high strength aluminium alloy, prohibited under the Nuclear Suppliers Group because of its application in uranium enrichment. A shipment stopped in Jordan was inspected by the IAEA, who accepted, that with some modifications, the aluminium would be suitable for use in centrifuges. But we have no definitive intelligence that the aluminium was destined for a nuclear programme. We continue to judge that:

- while sanctions remain effective, Iraq cannot indigenously develop and produce nuclear weapons;
- **if sanctions were removed or became ineffective, it would take at least five years to produce a nuclear weapon.** This timescale would shorten if fissile material was acquired from abroad.

15. Iraq is capable of producing an **improvised nuclear device**, but it lacks suitable fissile material. [...]

Dispersal of key equipment

16. Following 11 September 2001 Iraq temporarily dispersed key equipment from its missile production facilities, and is likely to do so again if it believes an attack is imminent. Recent intelligence indicates that Qusai Saddam Hussain has directed the Military Industrialisation Commission to ensure that all sensitive weapons and chemical technology was well hidden in case of further UN inspections [...] Dispersal makes the targeting of production equipment very difficult, but it also prevents any surge in production while dispersed.