

Military Action in Iraq – A FoE response

In summary, this report argues for principled opposition to war in Iraq (or at least to military action that is not explicitly sanctioned by the UN). It advocates continued inspections linked to an end to sanctions, and pursuit of Saddam Hussein using the International Criminal Court.

The key arguments for such a position are that war:

- Risks further destabilising a heavily armed region, and stimulating a further cycle of potentially terrorist opposition from Islamist groups (see section 2.1).
- Would prolong global dependence on fossil fuels, and undermining economic incentives to invest in dispersed, renewable sources of energy (see section 2.4).
- Would further damage to institutions and infrastructure in the region, exacerbating poverty, mortality and morbidity, and chronic environmental damage by industry, agriculture and utilities (despite a possible end to sanctions) (see sections 2.3, 2.4 and 3.1).
- and undermine the effectiveness and legitimacy of international law and intergovernmental institutions, even if undertaken under a UN mandate, and especially if unilateral (see sections 2.2 and 2.5).

However, this implies that if other approaches failed in the medium to long term, UN-approved military action might be seen as necessary.

1. Reasons for principled opposition to military action

This section covers the social and human impacts, the regional political risks, the possible environmental impacts and the moral justification for war.

1.1 Social and political impacts

Since 1945 84% of the people killed in war have been civilians (Grossreider, 2002). Globally there are some 18 million international refugees from war, and an additional 24 million displaced within their own countries (Grossreider, 2002). According to the UN Office for the Coordination of Humanitarian Affairs, 80% of displaced people are women and children (cited by Grossreider, 2002). The direct impacts of conflict typically extend to the break-up of families, collapse of educational systems and widespread psycho-social suffering (Grossreider, 2002).

The combination of war, sanctions and government repression in Iraq has created five million Iraqi refugees and displaced 700,000 to 1 million people within Iraq (Graham-Brown & Toensing, 2002). In particular, hundreds of thousands of Kurds and Ma'had Marsh Arabs have been displaced. Nationwide over half of schools remain unfit for teaching (UNICEF, 2001). In a ground invasion of Iraq, Ritter & Pitt (2002) estimate civilian casualties of 30-40,000 are likely, mainly amongst Kurds and Shi'a Moslem groups.

Islamic reaction, stimulating terrorism and further war

Although there have been no links found between Al Qaeda and Iraq (Jeffery, 2002) an invasion of Iraq would inevitably heighten fundamentalist Islamist opposition to the west, and potentially increase sympathy for terrorist organisations amongst other Islamic nations. However this might be offset by greater fear of unilateral US military response (Lieven, 2002).

The emergence of Saddam Hussein's regime can be understood as a reaction to previous Western interference in the region dating back to the First World War. After the war, the western powers established states and governance structures, and appointed leaders to suit their interests rather than those of the Arabs (Knightley, 2002). Britain was subsequently involved in crushing revolution in Iraq. In 1979 Saddam Hussein came to power on a platform of Arab unity and resistance to Western influence in the region. In this context, invasion and occupation are only likely to trigger a further cycle of resistance and bloodshed.

Destabilising the Middle-East ...

War creates various risks of regional destabilisation, even if carried out under an UN mandate. The key issues relate to Israel, Saudi Arabia and the structure and relations of a post-war Iraq.

One plausible scenario involves Iraq again targeting Israel (as during the Gulf war), and Israel – under the current more extreme regime – responding with military force (in the worst case with nuclear weapons). Another is that the US or UK would respond to Iraqi use of chemical or biological weapons with a nuclear strike, which the Secretary of State for Defence does not rule out (Rogers, 2002b).

Rosemary Hollis (2002), Head of the Middle East Programme at Chatham House reports that anti-American sentiment is running high among Saudis, fuelled by anger at US support for Israel. Oil companies are allegedly increasingly concerned about the stability of Saudi Arabia, following an 'alarmist briefing to the Pentagon by the Rand Corporation' in August 2002. The briefing suggested the possibility of the overthrow of the currently western-friendly regime in favour of a hard-line Islamist regime prepared to restrict oil supplies for political goals

(Sampson, 2002). It is clearly possible that a US invasion of Iraq – facilitated by use of Saudi Arabian military bases – could trigger such a revolt. If Saudi Arabia's oil production was entirely halted, world oil prices could rise as high as \$100 a barrel (Fox, 2002). More conservatively, Clawson (2002) highlights increased tension in Saudi Arabia and other Gulf states as a likely consequence of US military mobilisation.

Under several post-war scenarios, Iraq could split into three potentially conflicting parts: Shi'a, Sunni and Kurdish. The Shi'a area would include most operating oil fields and much of the future potential. It would also have close links with Shi'a in Iran which currently hosts the Iraqi Shi'a opposition movement. The Turks have already threatened a military response should an independent Kurdistan emerge in northern Iraq. Similarly Iran wants to see an end to Sunni Iraqi support for the Iranian opposition movement: the Mujahidin-e Khalq (Hollis, 2002). Jordan has indicated its intent to use armed force if necessary to prevent any large influx of Iraqi refugees (Graham-Brown & Toensing, 2002). The risks of escalating and spreading conflict across the heavily armed region would be severe (according to CAAT, the Middle-East accounts for at least 40% of the international arms market of approx \$30 bn).

David Mephram (2002) notes the willingness of the UK, post September 11, to supply arms to countries seen as on side in "the war on terror", even when they have poor human rights records. This includes countries like Bahrain, Jordan, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates. Mephram advocates tighter export controls in the UK. Firstly, the Government should tighten controls over arms brokers, including UK nationals who leave the UK to broker their deal. Secondly, the Government needs to change the way in which arms export decisions are taken, placing clear limits on Ministerial involvement in arms export promotion. Thirdly, there needs to be greater parliamentary involvement on arms issues through a 'prior parliamentary scrutiny' committee.

The issue of water is of particular significance for international relations in the Middle-East. Tension between Turkey and Syria over the GAP regional project on the Tigris is only one example. Control over water has also been used as a political tool within Iraq, particularly with the draining of the Mesopotamian Marshes (detailed below). Large quantities of water are effectively exported from the region – for example in Israeli fruit and fruit juice exports. Water conservation should be a priority for technological support in the region (above arms or oil development). More speculatively, western nations should support development of large-scale photovoltaic generation capacity to power desalinisation plant, in turn helping to further reduce the installed cost of photovoltaics throughout the world as a result of the dramatic economies of scale that could be achieved through such increased demand.

The US is reportedly considering a plan for the prolonged occupation of Iraq, under a military government to prevent disintegration of the country. The model is that applied in Japan after world war two, which stayed in power for over six years. Henry Kissinger said: "*I am viscerally opposed to a prolonged occupation of a Muslim country at the heart of the Muslim world by Western nations who proclaim the right to re-educate that country*" (Sanger & Schmitt, 2002).

... And elsewhere

More speculatively, at least one commentator has suggested that a conflict in the Gulf may be seized upon by China as an opportunity to invade Taiwan whilst American forces are overstretched and unable to respond swiftly (Preston, 2002).

Legitimising armed pre-emptive action

The emerging US doctrine is one of pre-emptive unilateral action. It is set out in the new National Security Strategy (2002) which is a frightening statement of US ideology advocating the imposition of US values and economic models wherever the US deems there to be a threat to the US or its allies or friends.

In turn, for the US to promote such an approach makes it more possible for other states to similarly justify action. And if India or China decides to do so, what will prevent it?

1.2 Would a war be 'just' and constitutional?

International law on warfare has been developed down the centuries by international jurists and philosophers of law. It forms the basis for many treaties which have established legal limits on what states may do, even in time of war, such as the Hague Convention. The principles at the core of this intellectual tradition are commonly grouped under the heading of "Just War Theory".

The following summarises the key principles for a just war (based on Walzer, 1977). (Note that *all* conditions must be satisfied for a war to qualify as just in these terms – so for example, a just cause is not sufficient by itself for a just war.)

- A just war can only be waged as a last resort. All non-violent options must be exhausted before the use of force can be justified.
- A war is just only if it is waged by a legitimate authority.
- A just war can only be fought to redress a wrong suffered, for example, self-defence against an armed attack. A just war can only be fought with "right" intentions: the only permissible objective of a just war is to redress the injury.
- A war can only be just if it is fought with a reasonable chance of success.
- The ultimate goal of a just war is to re-establish peace. More specifically, the peace established after the war must be preferable to the peace that would have prevailed if the war had not been fought.
- The violence used in a just war must be proportional to the injury suffered. States are prohibited from using force not necessary to attain the limited objective of addressing the injury suffered.
- The weapons used in war must discriminate between combatants and non-combatants. Civilians are never permissible targets of war, and every effort must be taken to avoid killing civilians. The deaths of civilians are justified only if they are unavoidable victims of a deliberate attack on a military target.

Applying these tests, it is hard to see how the conflict with Iraq could qualify as just. Certainly, conflict without the explicit endorsement of the UN Security Council would seem to contradict principle 2 above (legitimate authority). Even if the Security Council does endorse action it is hard to see how the action could be held to redress a wrong suffered (Iraq was clearly not involved in the 11th September attack on the US), nor how it could be proportional. It is also highly questionable whether the consequent peace will be an improvement on what went before (the benefit to the Iraqi people in removing Saddam would have to be balanced against political consequences elsewhere and the destruction wrought in the process).

On the other hand, international law generally recognises the legality of action to defend against forces that present an imminent danger of attack (under Article 51 of the UN Charter). In its new National Security Strategy the US seeks to redefine the concept of imminent threat to incorporate what it sees as a new and different reality of threats from rogue states and terrorists.

American critics of the move to war believe that war on Iraq may be unconstitutional. The US congress granting of sweeping war powers to Bush may be interpreted as a breach of constitutional responsibility on the part of Congress, which alone under the US Constitution is authorised to declare war. In addition, the UN Charter prohibits regime removal, and as the

US has signed the UN Charter, regime removal is not only a violation of international law, but also unconstitutional (Ritter, 2002).

The reality of ‘imminent danger’ in practice depends on whether Iraq has or could quickly obtain weapons of mass destruction. A review of evidence on this topic is beyond this paper. Suffice it to note that even some of the previous weapons inspectors question the validity of US and UK claims that this is the case (Jeffery, 2002). However various reports seem to verify that Iraq has successfully evaded sanctions to import equipment and materials to at least in part reconstruct its military capabilities (El-Khatib, 2002; Evans, 2002a&b; Orme, 2002; Warner & Fidler, 2002; Timmerman, 2002). Still El-Khatib concludes that “*today Iraqi engineers and scientists certainly still depend on foreign expertise, imported critical components, spare parts and material, especially in the nuclear, missile and chemical fields and to a lesser extent in the biological field. Such a reality tends to moderate the clear and present danger*” (p52). El-Khatib also highlights the inadequacies of export controls in “many countries” as a contribution to Iraq’s ability to evade sanctions.

1.3 Environmental impacts

This section covers the direct and indirect environment and health impacts – including pollution from destruction of industrial and military targets and other facilities, contamination from weapons (notably depleted uranium), and incidental damage to biodiversity. It suggests that the direct environmental impacts of war would be significant at the local scale, but unlikely to be prolonged and significant at a regional level. However a war could further undermine institutions and mechanisms for environmental protection. The indirect impacts of regional destabilisation (see above) or prolonged US fossil fuel dependence (see below) are likely to be the most significant.

We should also be alert to the risk that, as in Kosovo, the Iraqis may choose to publicise and exaggerate claims of environmental impact – thus potentially discrediting environmental organisations associated with those claims.

Environmental war

In 1991 Iraqi forces destroyed 732 oil-wells in Kuwait (Leaning, 2000), spilling 60 million barrels of oil, directly contaminating around 50 sq km. Over ten million cubic metres of soil remained contaminated in 1998. A major groundwater aquifer, accounting for 40% of Kuwait’s freshwater reserve remains contaminated. Ten million barrels were released in the Gulf, affecting 1500 km of coastline (GCI, 1998) and cost more than \$700 million to clean up (Krupa, 1997).

This was a breach of the 1977 Convention on the Prohibition of Military or any other Hostile Use of Environmental Modification Techniques (Wall, 2001). However Iraq is not a signatory to that convention, nor to relevant protocols of the Geneva Convention. Article 55 of Protocol I (1977) to the Geneva Convention Relating to the Protection of Victims of Armed Conflict states that “*Care shall be taken in warfare to protect the natural environment against widespread, long-term and severe damage*”. But under the Geneva conventions environmental damage can be generally justified on grounds of “*military necessity*”.

During the nine months that the wells burned, average air temperatures were reduced by 10°C as a result of reduced insolation. The costs of environmental damage were estimated at \$40 billion (GCI, 1998). Estimates of the numbers likely to die as a result of the air pollution effects were put at about 1000 – approximately the same as the number of direct casualties in the conflict (Krupa, 1997).

Scott (1995) reports that “*wetland vegetation in the Khuzestan lowlands of neighbouring southwestern Iran was damaged by acidic “black rain” from the burning oil well-fields in Kuwait, and it seems likely that similar damage occurred in the wetlands around Basrah, only*

a short distance to the west. The type and magnitude of the damage is not known, but is likely to have been temporary and reversible.”

Targets for military strikes

Targeting of industrial and military targets such as armaments factories or oil refineries creates a direct risk of acute chemical pollution. The UNEP-UNCHS report on Kosovo (1999) concluded that military action resulted in no general ‘ecological catastrophe’, but resulted in “*some serious hot spots where contamination by hazardous substances released during the air strikes poses risks for human health and the aquatic environment*” (p60). For example, targeting of the Zastava vehicle plant at Kragujevac resulted in releases of transformer oil contaminated with high levels of PCBs and dioxins/furans. More generally the research found higher levels of long-term environmental contamination from previous industrial activities than from the direct effects of military activities.

The following Iraqi sites are named in the UK assessment. They are reportedly active in producing chemical, biological or ballistic weapons, but little information is provided.

- Amariyah Sera and Vaccine Plant at Abu Ghraib – biological agent storage
- Fallujah castor oil production plant, ricin production
- Fallujah 2 nr Habbaniyah, chlorine and phenol plant
- Al-Dawrah Vaccine institute, production of biological agents
- Ibn Sina Company at Tarmiyah, chemical research centre
- Al-Qa’qa’ chemical complex, phosgene production plant
- Project Baiji at al-Sharqat, nitric acid and chemical complex
- Al-Mamoun – ammonium perchlorate production and propellant mixing
- Mobile biological agent production facilities.

These would presumably be targets for air strikes, with the risk of catastrophic failure of safety systems and containment in the event of an assault.

The environmental impacts of military supply industries generally exceed the direct effects of military action on the environment (Rogers 2002). Such industries often obtain relaxations of, or even exemptions from, environmental regulations. However their impacts are often veiled in military secrecy. Much evidence of such impacts has come from post-cold war sites in the former Soviet Union.

Other facilities damaged in war can also create pollution impacts. Further secondary environmental effects of the Gulf War included destruction of sewage treatment plants in Kuwait, resulting in the discharge of over 50,000m³ per day of raw sewage into Kuwait Bay (Price et al, 1994).

Depleted Uranium weapons

Perhaps the most significant environmental health concern regarding current weapons technology is that of depleted uranium (DU) projectiles.

DU is very dense and used in armour- and structure-piercing projectiles. In use they create significant amounts of fragments and dust releasing uranium oxide into the air (18- 70% of a DU penetrator burns and oxidises into small particles, 50-96% of which are of respirable size and most of which is not readily excreted from the body). Estimates of the use of DU by allied forces in the Gulf War range from 290 tonnes to 800 tonnes (Fahey, 1999; Slater 2002). Decontamination requires removal of contaminated soil and treatment as radioactive waste.

Decontaminating 200 hectares at a US Army proving ground cost \$4-5 bn. Thousands of hectares of Iraq and Kuwait could be contaminated (Fahey, 1999).

According a UKAEA 'threat paper' on Kuwait, 50 tonnes of DU inhaled could cause 500,000 additional cancer deaths over several decades based on International Committee on Radiological Protection risk factors (Fisk, 1998). Internal DU exposure is acknowledged to cause kidney damage, cancers of the lung and bone, respiratory disease, neurocognitive disorders, chromosomal damage and birth defects (Fahey, 1999). Fisk postulates a link between DU exposure and reported increases in child cancer rates in Iraq. However there is little empirical evidence of the impacts on troops and civilians in practice. A precautionary approach would suggest that DU weapons should not be used, despite apparent military benefits.

Species and habitats

The side effects of military action on natural environments are severe, but they are usually relatively short term (Rogers, 2002). The limited literature supports the view that more significant effects would result from long-term displacement of populations and damage to institutional capacity to protect habitats; than from the direct impacts of military activities.

The UN Environment Programme and UN Centre for Human Settlements (1999) report that, contrary to Serbian claims, air strikes in protected areas did not significantly affect biodiversity at the species or ecosystem level. This is consistent with ecological understanding of the role of disturbance in ecosystem functioning and development.

On the other hand, more comprehensive destruction of habitats, as might occur during a ground war could have irreversible effects. For example, Wall (2001) attributes Angola's loss of 90% of its 1975 wildlife populations in parks and reserves over 16 years to continued civil war. An 85% drop in numbers of migratory birds including the endangered Siberian crane has been attributed to the impacts of war and bombing in Afghanistan (Pearce, 2001) but it is not known whether this impact has persisted.

It has proved hard to obtain any meaningful data on threatened species or habitats in Iraq. However there are some particular reasons for concern about the likely impacts of military action.

Marine biodiversity

The Gulf and Sea of Oman region is significant for turtle populations – *“it is one of the most important marine turtle habitats in the world ... [and] plays a significant role in sustaining the life cycle of the marine turtle populations in the whole North-Western Indo Pacific region”* due to its shallow depth and high water temperature. Of the seven species of marine turtles in the world five are found here: of which four are 'endangered' and one 'threatened' (GEF, 2001). There are more than 66 turtle nesting beaches along the Iranian coast. No data is available regarding the much shorter Iraqi coastline. One of the major threats to turtles in the region is oil spills. Oil spills in the Gulf War are believed to have killed a number of turtles and left others chronically affected with skin lesions (Krupa, 1997).

Fallout from burning oil products produced a sea surface microlayer that was toxic to plankton and the larval stages of marine organisms and sea temperatures were also depressed (UNEP, 2000; Price et al 1994). The IUCN (Price et al, 1994) reports that much of the surface oil in intertidal zones had substantially degraded within a few months, but high levels of contamination persisted in sediments for at least two years. Acute effects were experienced by birds and marine life such as otters and dugong (WCMC, 1991), but there was little evidence of widespread coral death (Price et al 1994). The IUCN – in an assessment three years after the war – expected that most ecosystems and species groups were on a route to full recovery

over five years. By 1998 the GCI reported that impacts of oil contamination due to the war had become difficult to distinguish from those resulting from ongoing oil industry pollution.

Prawn fisheries were dramatically affected in the years immediately after the war. In 1991-92 spawning biomass in the Saudi Arabian prawn stock dropped to just 1-10% of pre-war levels, and total biomass to 25%. Landings in the Bahraini prawn fisheries dropped by 50% (Price et al, 1994).

Terrestrial and wetland biodiversity

Data and research on the biodiversity of Iraq is limited. There is little information on fish, amphibians and reptiles (Scott, 1995). Whilst the mammals are relatively well known, and there is extensive data on birds in Mesopotamia, this is largely out of date and no major surveys have been conducted since 1979. (Note: We could map the wetlands: grid references are available but area data is old and partial, so this would probably not be worthwhile).

Iraq's wetlands were, and may still be, of major international significance, especially for wildfowl. In 1979 19 wetlands in Iraq were considered to be of international importance on the basis of the Ramsar criteria. Thirty-three Iraqi wetlands were included on a 1993 provisional list of wetlands of international importance in the Middle East (Scott, 1995). "*The wetlands of lower Mesopotamia play a vital role in the maintenance of biodiversity in the Middle East, primarily because of their large size, the richness of their aquatic vegetation and their isolation from other comparable systems*". As of 1995 they were home to two endemic species and an endemic subspecies of mammal, two endemic species and two endemic subspecies of bird, and several endemic species and subspecies of fish. They supported substantial numbers of at least seven species of mammals and birds listed in the IUCN Red List of Threatened Animals, and were of international importance as a staging and wintering area for at least 68 species of waterfowl and nine species of birds of prey. They were also of great cultural significance, having provided a home for the Ma'dan or Marsh Arabs for at least five thousand years.

Within the last decade, major hydrological engineering activities in and around the wetlands of Lower Mesopotamia have resulted in the drying out of vast areas of wetland in the Central Marshes and Haur Al Hammar, and could even lead to the disappearance of these systems. Destruction of wetlands continues on a massive scale. A comparison of Landsat images taken in 1984/85 and 1991/92 revealed that the area of permanent lakes and marshes, seasonal marshes and temporary marshes in Lower Mesopotamia had been reduced by over 25% from 1.94 million hectares to 1.44 million hectares during this seven-year period (Maltby, 1994). By mid 1993 about two-thirds of the Central marshes were reportedly dry (Scott, 1995). By 2002 the area of the Mesopotamian marshes may have been reduced by as much as 90% (Silverman, 2002).

Iraq is not a contracting party to the Ramsar, Bonn or Biodiversity conventions. However in 1994 it signed a memorandum of understanding under that convention to contribute to protection of the extremely endangered Slender-billed Curlew: "*almost certainly the rarest and most poorly known bird species in Europe*" (MoU, 1994). Small populations of the slender-billed curlew are believed to winter on the Gulf coast of neighbouring Iran, and despite very few sightings, give the extent of habitat and the poor coverage by ornithologists "*there is a distinct possibility that a significant wintering population of this endangered species continues to survive*" in the Mesopotamian marshes (Scott, 1995). Today that possibility has been dramatically reduced.

Scott (1995) notes the impacts of war: "*In the last 15 years, the wetlands of lower Mesopotamia and neighbouring Iran have come under considerable pressure from regional conflicts. Much of the fighting during the prolonged Iran-Iraq War (1980-88) took place in and around the wetlands, and caused considerable damage to the marsh ecosystems. Haur Al Hawizeh probably suffered the most damage of all Iraqi wetlands. Several of the greatest*

battles of the war took place in these marshes, and involved extensive burning, heavy bombing and shelling, and widespread use of chemical weapons. Large areas of reed-beds were deliberately destroyed by Iraqi troops in Haur Al Hawizeh and the Central Marshes during searches for deserters; heavily armoured boats were used to crash through reed-beds, special reed-cutting machines were used, and large areas were simply set on fire. Similar methods were used after the 1991 Gulf War to search for anti-government rebels. In other respects, however, the Gulf War seems to have had relatively little impact on the Mesopotamian marshes” (emphasis added).

In conclusion, given the ongoing deliberate destruction of wetlands, and the lack of institutions and mechanisms for their protection, even a ground invasion of Iraq – despite potentially threatening remaining fragments of habitat – may not have overall negative effects on the medium to long-term conservation status of Iraq’s wetlands and associated species. However war may well lead to continued displacement of populations and further erosion of Iraq’s weak institutions for biodiversity conservation and pollution prevention – thereby continuing or even accelerating chronic environmental damage in the region.

1.4 Ulterior motives for war

There are other interests that might be driving the US towards war, or that might, from another perspective, justify military action. These fall into two broad, and interrelated categories: oil and politics.

A War for Oil?

The Gulf Region ... is a “vital interest” of “long standing” ... and the US “must have free access to the region’s resources” Gen AC Zinni – Commander in Chief US Central Command, in testimony to Congress in 1999 (cited by GPF, 2002).

The basic geopolitics of oil are illustrated in Annex 4. The US is the world’s largest net importer. Growing demand in Asia – especially China - makes long-term security of supply for the US a major issue. In the longer term enhanced influence or even control over Iraq’s oil would appear to benefit the US by ensuring low and stable prices. Direct US control of Iraqi reserves could be used to break Saudi Arabia’s hold on OPEC. In the short term, military action could risk temporarily higher prices. According to Lieven (2002), given the environmental implications of continued fossil fuel dependence, war on Iraq is part of “*a strategy to use American military force to permit the continued offloading onto the rest of the world of the ecological costs of the existing US economy*”.

In 1996 the US for the first time imported more than half its oil supply. By 1998 the annual cost of US energy imports was \$65 billion (Levin, 1998). However the US increasingly relies on Canada, Venezuela and Mexico (along with Saudi Arabia) as main sources of imports. During the first seven months of 2002 the US imported an average of 566,000 barrels per day from Iraq (in the form of UN sanctioned exports), with large importers including ExxonMobil, Chevron, Citgo, BP, Marathon, Coastal, Valero, Koch and Premcor.

Global oil prices temporarily doubled as a result of Iraq’s invasion of Kuwait in 1990. The short-term effects of military action will depend on three main factors: global production capacity in relation to current demand, the scale of strategic reserves of oil, and the willingness of OPEC and other producers to utilise capacity or reserves.

Global consumption levels are 75.3 million barrels per day (bpd) (BP, 2001), with a reported current excess capacity of around 6 m bpd. The US has built up a strategic reserve – as of July 2002, this held about 580 m barrels (purchasing for the reserve at 150,000 bpd accounted for more than half the growth in world oil demand in the first half of this year) (Tyler, 2002). Oil could be dispersed from the reserve at over 4 million bpd. This implies a limited impact, especially as markets have already factored in the likelihood of war (raising prices to \$27 per

barrel at Oct 30th 2002). In Osaka in September OPEC agreed not to increase output, reportedly concerned at the likely price effects in a weakening global economy. US economic commentators agree – suggesting that prices might rise to \$40 per barrel but only briefly (Coy, 2002).

In the longer term, release of more of Iraq's oil – currently heavily constrained by sanctions - will act to depress world oil prices. Iraq has the second largest proven reserves of any nation – at least 112 billion barrels – along with 220 billion barrels of probable and possible resources (and large relatively unexplored areas) (EIA, 2002). For comparison, Saudi Arabia has 260 bn barrels of proven reserves. Iraq's production or 'lifting' costs are amongst the lowest in the world at approximately \$1 per barrel compared with \$4 in the US and North Sea, and \$2.5 in Saudi Arabia. This is primarily because the oil deposits are close to the surface. Iraqi oil is also generally low in sulphur.

The rate at which production can be increased in a post-war Iraq would depend on its willingness to participate in OPEC, and the rate of investment in renewing and extending infrastructure for oil development. 55 of Iraq's 70 proven fields are undeveloped (Graham-Brown and Toensing, 2002). Much of Iraq's existing infrastructure is damaged and some oil reservoirs may have been damaged by overpumping, water injection or flooding (EIA, 2002) and without technical and infrastructure assistance production rates may fall significantly. Most pipelines and transfer facilities are also damaged. Overall, experts suggest a "sustainable" production capacity of no more than 3 m barrels per day, or a 20-25% increase over current production levels (EIA, 2002). However 417 new wells are planned – to be drilled by Russian, Chinese, Iraqi and Romanian companies (EIA, 2002). Less cautious commentators suggest that production levels could reach 7-8 m bpd within five years - requiring investment of at least \$30 bn (Klebnikov, 2002).

Given increasing demand for oil from China in particular, such increases may not depress oil prices dramatically, but merely maintain them at levels that would continue to discourage investment in renewable energy and energy efficiency all around the world. In particular, incentives for Middle-Eastern countries to invest in photovoltaics would be hampered, despite the natural endowment of these countries with high insolation and large areas of relatively unproductive land. Global emissions of carbon dioxide would grow more rapidly than in the absence of the war and efforts to tackle global warming could be expected to be focused on end-of-pipe solutions such as sequestration or injection of carbon dioxide into exhausted oil fields. Lower prices would also discourage costly oil investments in areas such as Alaska and Siberia (hampering Russian efforts to obtain foreign investment in the latter). Interestingly, Jim Melcher of MIT estimates that taking into account the military costs of maintaining security of supplies would raise the price of oil close to \$100 per barrel (Cited in Levin, 1998).

Iraq has signed many contracts for development of its oil resources. Some of these may have been deliberately placed to solicit political support at the UN. French and Russian companies have been particularly favoured. However, Iraq has a heavy debt burden – possibly as high as \$140 bn including debts to Russia and other Gulf states. It has also recently agreed to honour its \$10-12 bn debt to Russia. Oil contracts also offer a way to repay or renegotiate such debts.

Major companies reportedly with deals in Iraq include TotalFinaElf (for 12.5-27 bn barrels of reserves), Russia's Lukoil, Zarubezneft and Mashinimport (7.5-15 bn barrels), the China National Petroleum Company (CNPC) and Eni (less than 2 bn barrels). Other countries with contracts or in principle deals include India, Vietnam and Algeria (Morgan and Ottaway, 2002). See Annex 1 for more information on contracts. Most deals are for post-sanctions development, although much maintenance and even development activity is ongoing within the constraints of the "oil for food" sanctions regime.

US oil companies do not hold development contracts in Iraq, and with exception of some potential small deals by Shell, nor do UK companies. From the perspective of companies such as Chevron, sanctions have kept the rivals at bay (GPF, 2002). Press speculation has

suggested that both France and Russia are concerned that the US is already negotiating with Iraqi dissident groups to ensure that a replacement Government in Iraq would not honour contracts made by Saddam and would instead provide preferential access for US companies (Vulliamy et al, 2002).

Political gain and domestic distraction

Lieven (2002) suggests that by a continued show of strength, the Bush administration hopes to induce greater cooperation by Muslim states into tracking down and handing over suspected terrorists, and also to forsake the Palestinian cause. Moreover he argues that this approach is calculated to win the Jewish vote in the US, by demonstrating Republican commitment to Israel's defence and regional ambitions.

Whether this is true or not, the continued 'war on terrorism' in all its guises has served to maintain a strong popularity rating for President Bush. The Republican gains in mid term elections probably also indicate that Americans continue to treat war and terrorism as the key political issues (above the state of the economy). Indeed the US typically votes for the incumbent party when the country is at war, or preparing for war.

A cynical view might suggest that posturing on Iraq has been exploited deliberately for domestic political advantage and to distract the American public from the poor state of the economy and the previous role of key members of the administration (Cheney and Bush) in companies caught up in the accountancy scandals that have seriously weakened American stock markets (Plesch, 2002).

1.5 Double standards

Negative arguments against war include a number under this heading. Whilst alone they do not justify opposition to war, they support a broader case, and cast doubt on the moral 'justness' of the proposed action.

International Governance

Since FOE's establishment in 1970 it has campaigned in favour of international law and institutions to protect the environment and support sustainable development. The future of our global environment depends on development of, and respect for, effective international law.

The emerging US doctrine of unilateralism runs directly counter to this need. It is demonstrated in the USA's continued reluctance to fund the United Nations adequately; its failure to participate constructively in the negotiation of the Kyoto Protocol to the UN Framework Convention on Climate Change; and most dramatically in its resistance to the establishment of the International Criminal Court. The US even threatened to veto any fresh or renewed UN peacekeeping if they failed to obtain an exemption for American servicemen from the jurisdiction of the court. In the new National Security Strategy the US goes even further – refusing to recognise the jurisdiction of the court over any American. But when it comes to Iraq, the US demands and expects the cooperation of the UN.

Israel – Palestine and other Security Council resolutions

Israel has ignored a series of UN resolutions between 1967 and 2002 regarding its intrusions and activities in Palestine. The US has failed to use its leverage to enforce those resolutions. The resolutions against Israel were passed under Chapter 6 on peaceful dispute resolution and are arguably non-binding, whilst those against Iraq after the Gulf War are binding – having been taken under Chapter 7 powers to deal with acts of aggression (The Economist 12/10/02). Such pedantry ignores the context in which the US is choosing to act, and also ignores the materially similar content not only of the Israel resolutions, but of over 90 other un-enforced

UN Security Council resolutions, including at least one other taken under Chapter 7 (Resolution 1264 of 1999 on East Timor) (Zunes, 2002).

Weapons of Mass Destruction

Other countries – including Israel, South Africa, India and Pakistan - have developed and deployed weapons of mass destruction without facing US-led military threats. North Korea is the most recent case, and is even a member of the so-called “Axis of Evil”. Indeed it has even been reported that North Korea pushed ahead with its nuclear programme in response to being labelled in this way (Raimondo, 2002). The US of course, itself also retains and deploys such weapons.

2. What conditions might justify war?

Would a UN mandate be enough to justify military action, or would that require wider regional support, or limits on the nature of the action or the weapons used? This is a difficult judgement, as the status quo is clearly very damaging to the civilian population and the environment in Iraq.

In principle, military action should not be used until all other options have been exhausted. Sanctions have been tried, but not an experimental 'incentives' regime to replace sanctions, linked to an effort to indict Saddam Hussein and bring him to justice in the International Criminal Court for crimes against humanity.

Impacts of sanctions

Economic sanctions were introduced in 1990, and have been maintained in some form ever since. Exclusions for 'humanitarian goods' have been frequently challenged by the US or UK on grounds that the imports could have an alternate military use. Since 1996 sanctions have operated under an 'oil for food' regime which has increased food and humanitarian imports paid for by UN regulated oil sales. It is widely reported that Iraq successfully evaded sanctions to sell oil illicitly, obtaining revenues to fund military reconstruction.

In an independent study published 19 months after the Gulf War, the New England Journal of Medicine reported that during the first eight months of 1991, nearly 47,000 more children than normal died in Iraq, and the country's infant- and child-mortality rates more than doubled, to 92.7 and 128.5 per 1000 live births respectively (Ascherio et al 1992).

In 1999 a UNICEF survey confirmed that mortality rates amongst children under five in central and southern Iraq had doubled from the previous decade (cited by Graham-Brown and Toensing). In 2000 a joint FAO-World Food Programme mission found that since the 'oil for food' programme, child malnutrition rates in south and central Iraq had not improved: nutritional problems remain widespread and serious (FAO 2000).

In March 1999 the UN Security Council's Panel on Humanitarian Issues concluded that "*the Iraqi people would not be undergoing such deprivations in the absence of the prolonged measures imposed by the Security Council and the effects of war*". Bombing had inflicted extensive infrastructural damage compromising provision of clean water, sanitation and electrical power. Power is typically available for only 6-12 hours per day in summer (exacerbated by the impacts of drought on hydro-electric generation). In turn this limits the capacity of water and sewage treatment plants. 500,000 tonnes per day of raw sewage is discharged into fresh water. Contaminated water is blamed for the average of 14 episodes of diarrhoea per year amongst children under five (UNICEF). The prevalence of serious water borne diseases is also on the rise: between 1997 and 1999 reported typhoid cases rose 60% and cholera cases rose almost 5-fold (FAO, 2000).

Sanctions hampered reconstruction as well as hampering access to farm machinery and agro-chemicals, leading to significant deterioration of the agriculture sector and falling harvests. The 2000 cereal harvest was forecast to be down by 80% over 1997, vegetable production down by a third and fruit production by 13% (FAO, 2000).

The Secretary General of Amnesty International describes the use of human rights arguments to justify military action as "*a cold and calculated manipulation of the work of human rights activists*" (Khan, 2002) and supports the lifting of all sanctions.

2.2 How else can UN compliance be achieved

Incentives not sanctions

The sanctions regime has been adjusted several times without effectively delivering internal pressure for regime change, whilst continuing to harm the health and human rights of Iraqi civilians. There is no realistic proposal for a revised sanctions regime that could be pursued indefinitely.

An incentives regime based on lifting sanctions, targeted aid programmes and new oil contracts might even have more potential to tie Iraq into the regional and global economy and break the power of the Saddam regime which currently benefits from control over illicit trade and internal political sympathy. In parallel heavy investments in renewable energy and energy efficiency could dramatically reduce western dependence on Middle-East oil.

Continued inspections

The current inspections regime appears to offer reassurance that Iraq offers little external threat. Several nations now argue for continued inspections as a peaceful option. The inspectors themselves believe that the process is effective, although it is not satisfying American 'hawks'.

The previous inspections regime was halted in 1998 after evidence emerged that the US and possibly the Israelis had been receiving evidence gathered in the course of UNSCOM inspections (Graham-Brown and Toensing, 2002). Conflicting reports suggest that the inspectors were forced out of the Iraq, and then operation Desert Fox commenced: or that the inspectors were pulled out so that bombing could start.

The Carnegie Institute has advocated a regime of coercive international inspections, utilising a powerful, highly mobile multinational military Inspections Implementation Force, created by the UN Security Council with access to all sites and backed by capacity to track Iraqi procurement activities outside the country (Matthews, 2002). Whether such a model is required remains debateable.

Use the International Criminal Court

One option would be to seek an indictment of Saddam Hussein and his senior leadership in the International Court for crimes against humanity. This would of course further expose American hypocrisy, as they do not accept that the International Criminal Court has jurisdiction over Americans.

Annex 1: Reported contracts in Iraqi oil fields and exploration zones

	Location	Reserves	Status	Reported contracts
Kirkuk	Northern			Tatneft & Zarubezneft (Russia)
Bai Hassan	Northern			Tatneft & Zarubezneft (Russia)
Jambur	Northern			
Khabbaz	Northern			
Saddam	Northern	3 bn barrels		Tatneft & Zarubezneft (Russia)
Ain-Zalah-Butmah-Safaia	Northern			
East Baghdad		11 bn barrels	Operating	
Khurmala	Northern			Turkish Petroleum International Corp.
Abu Ghirab	Southern		Damaged or partly mothballed	
Buzurgan	Southern		Damaged or partly mothballed	
Fauqi	Southern		Damaged or partly mothballed	
Suba-Luhais	Southern	2 bn barrels	Damaged or partly mothballed	Slavneft (Russia-Belarus)
Nahr Umr	Southern	0.44 m bpd	Damaged or partly mothballed	Total-Fina-Elf (France)
Rumaila	Southern		Operating	Zarubezhneft, CNPC
West Qurna	Southern	11-15 bn barrels	Operating	Lukoil (Russia)
Halfaya	Southern	2.5 – 4.6 bn barrels		BHP, CNPC, Agip 'interested'
Kurmala	Northern		Potential	
Majnoon	Southern	12-20 bn barrels	Potential	Total-Fina-Elf (France)
Nasiraya		Under 2 bn barrels	Potential	Eni (Italy), Repsol (Spain)
Tuba		Under 2 bn barrels		ONGC (India), Sonatrach, Pertamina (Indonesia)
Ratawi		Under 2 bn barrels		Shell, Petronas, CanOxy
Gharaf		Under 2 bn barrels		Japex, TPAO
Amara		Under 2 bn barrels		PetroVietnam
Noor		Under 2 bn barrels		
Block 8	Western		Prospecting	ONGC (India)
Block 3	Western		Prospecting	Pertamina (Indonesia)

Source: EIA, 2002

Annex 2: Iraqi oil export routes and capacities (EIA, 2002)

- IPSA pipeline to Yanbu (Saudi Arabia, Red Sea) 1.6 m bpd – ownership contested by SA.
- Iraq – Turkey twin pipelines to Ceyhan (Mediterranean) 1.6 m bpd (currently limited to 0.9 m bpd)
- Iraq (Kirkuk) – Syria (Baniyas) pipeline 0.3 m bpd (currently unable to operate over 50% of capacity)
- Mina al-Bakr (Gulf port) 1.6 m bpd (currently limited to 1.2-1.3 m bpd)
- Khor al-Amaya (Gulf port) 0.5-0.7 m bpd (pre-war capacity, currently inactive)
- Proposed Iraq – Jordan pipeline to Zarqa (0.15 m bpd)

Annex 3: Oil Exports and Reserves

Country	Exports 2001 (m bpd)	Proven Reserves (bn barrels)
Saudi Arabia	7.38	261.8
Russia*	4.76	48.6
Norway*	3.22	9.4
Iran	2.74	89.7
Venezuela	2.60	77.7
UAE	2.09	97.8
Nigeria	2.00	24.0
Iraq	2.00	112.5
Kuwait	1.80	96.5
Mexico*	1.65	26.9
Libya	1.24	29.5
Algeria	1.24	9.2
Sub-total	32.72	883.6
World	43.75	1050.0
* Not a member of OPEC	Source: Fox, 2002	Source: BP Annual Review 2002

Annex 4: The basic geopolitics of oil – ‘who has it: who wants it’

Country/Region	Production (% share of world total)	Consumption (% share)	Surplus / Deficit (%C - %P)
North America	18.3	30.4	-12.1
USA	9.8	25.5	-15.7
South & Central America	9.9	6.2	3.7
Europe	9.0	21.7	-12.7
UK	3.3	2.2	1.1
Former Soviet Union	11.8	4.8	7.0
Russia	9.7	3.5	6.2
Middle East	30.0	5.9	24.1
Iraq	3.3	-	3.3
Saudi Arabia	11.8	1.8	10.0
Africa	10.3	3.3	7.0
Asia Pacific	10.6	27.7	-17.1
China	4.6	6.6	-2.6
Japan	-	7.0	-7.0
Source: data from BP Annual Review 2002			

Annex 5: The environment of Iraq

Topographically, Iraq is made up of four main regions that differ slightly in climate, topography and soil (Scott, 1995). These are as follows:

(1) The mountain region

This extends from the northern and northeastern frontiers of Iraq on the borders of Turkey and Iran south to a line from Sinjar in Mosul Province to Zakho, Dohuk, Arbil, Kirkuk, Tuz, Kifri and finally Halabja on the Iranian border. Heights range from 900 to 3,660 m.

(2) The upper plains and foothills region

This steppe sub-montane belt extends from the high mountains to the foot of Jabal Hemrin, and forms a transitional area between the highland areas and the desert plains.

(3) The desert plateau region

The desert plateau comprises the largest part of Iraq (almost 57% of the total land area), and extends from the edge of the upper plains and banks of the Euphrates River to the frontiers with Syria, Jordan and Saudi Arabia. Conditions grade from semi-desert to a more typical sandy desert in the far south and west.

(4) The lower valley

The great alluvial plains of the Tigris and Euphrates Rivers comprise about 25% of Iraq's surface area. The whole area is extremely flat and annual flooding regularly inundates immense areas of land. As a result, much of the region is swampy. At the height of the flood season in spring, virtually all of the land in the triangle Basrah-Amara-Nasiriya was formerly one expanse of continuous marshland, while in the dry season there remained numerous large permanent lakes and extensive reed beds inter-connected by an intricate network of channels. In recent years, the seasonal flooding has occurred on a much smaller scale than before because of intensive water regulation by dams upstream.

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