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**UNCONVENTIONAL WEAPONS PROLIFERATION IN THE MIDDLE EAST: THE
REGIONAL AND INTERNATIONAL IMPACT**

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The production of ballistic missiles and chemical weapons (CW) and their use in combat is often portrayed as a new factor of the strategic equation in the Middle East. In fact, these developments are neither new nor confined to that region. However, the widespread acquisition of unconventional weapons and their actual use are essentially phenomena of the 1980's and of the Middle East region.

This paper will concentrate on two issues: the likely effects of proliferation on the politico-military balance of the region; existing and potential anti-proliferation policies. Preliminary to this analysis is country-by-country review of the situation. Finally, the paper will dress a tentative agenda of the linkages between the proliferation of unconventional weapons in the Middle East and broader security issues at the East-West, West-West, North-South and South-South levels.

The state of affairs

The record of past misjudgements about Middle Eastern military developments is such that one should be cautious about drawing too many conclusions on the basis of current assessments of capabilities and potentialities. The following information is based on what analysts believe to know as of spring 1990...

Israel

Israel's domestic military industry is the most sophisticated and developed of any Middle East state, and it is certainly qualitatively superior to those of its Arab rivals. This is reflected in the edge that Israel enjoys at the regional level in conventional and unconventional weapons and delivering systems, both deployed and under development.

Speculations about Israel's nuclear program are widely known after Vanunu's revelations in 1986 (1). Although important details are still unclear, it can be stated that Israel has a sophisticated nuclear capacity and arsenal.

Israel's nuclear arsenal is believed to comprise most likely 100-200 bombs, including some fission bombs suitable for missile warheads or tactical uses. All this means that Israel's nuclear arsenal is only slightly inferior to China's. Delivery systems, apart from the ballistic missiles discussed below, include several hundred aircrafts and probably some artillery pieces; also, nuclear capable missiles are believed to be deployed in hardened silos (Spector,

1988).

Israel's CW capabilities, like those of many countries, are little known. However, they are believed to include warheads for the Jericho I ballistic missiles (Robinson, 1990; Spector, 1988) together with advanced anti-CW equipment.

Reports indicate that Israel deploys two types of ballistic missiles: the US-built MGM-52C Lance (range: 110 km; some 12 launchers; CEP: 150-400 mt) and the locally produced Jericho I (some 50 missiles; range: 450 km). Already tested and possibly deployed are two improved variants of the Jericho system: the so called Jericho II, tested in May 1987 with a range of 800 km and a payload of 450 kilograms, and the Jericho IIB, tested in September 1989 with a 1,300 km range (the test flight ended in the Mediterranean some 400 km north of Benghazi, Lybia(2)). Some 100 Jericho of the second generations could be already deployed.

Israel launched in Sept. 1988 of a low-earth orbit satellite -the Ofek I- by a rocket baptised Shavit, a special version of Jericho IIB. This added a potential autonomous early warning dimension to Israel's military capabilities; moreover, the Shavit may provide a basis for a Jericho 3 with a potential range up to 7,000 km (3).

Two other developments must be underlined regarding Israel's actual and potential missile capacity. The first is the ability to deliver nuclear strikes beyond the Middle East region (most notably the Jericho IIB can reach the Soviet Union's southern territory); the second is the Israeli effort to develop an ATBM capacity in co-operation with the US (4).

Syria

No nuclear capacity or intention has been attributed to Syria, the only hint in this direction being a vague nuclear guarantee allegedly extended by the USSR in the 1980s - at least according to Defence Minister Mustapha Tlass. The meaning of this alleged 'extended deterrence' is more questionable than ever, given the decline of Soviet military assistance to Syria in 1989.

Syrian CW capabilities include production of a variety of CW agents and munitions, began in the mid 1980s with the assistance from West European firms; CW are stockpiled for battlefield missions (Webster 1989, as quoted in Robinson 1990). The main Cw production center is believed near the city of Homs.

At least two types of ballistic missiles in Syria's arsenal are supposed to be able to deliver chemical warheads (most probably VX nerve gas): the 65 km of range Frog-7 (some 24 deployed) and the 300 km Scud B (some 18); both missiles are of scarce counter-force and even counter-city value given the combination of their limited range and/or accuracy.

Syria has no domestic missile program, but its line-up of ballistic missiles includes the more accurate SS-21 (120 km; some 12-18 launchers) besides the already mentioned Frog and Scud. However, Syria's existing missile arsenal is unable to cover the entire Israeli territory. To fill this gap Syria has actively sought to procure longer range missiles in the late 1980s, first the 500 km SS-23 from the USSR and then the M-9 from China, but the effort has failed so far (according to Israeli sources Syria turned to North Korea in Dec.

1989).

Egypt

A full party to NPT since 1981, Egypt has shown no nuclear intention since that time.

On the other hand, Egypt's ability to produce and deploy CW has a long history. Actually, Egypt is the only Third World country, other than Iraq, with an internationally confirmed record of use of CW (phosgene & mustard aircraft bombs during the 1966-67 intervention in North Yemen). Cooperation with Iraq in the production of CW warheads is likely, as it is a recent renewal of production at home (5).

Egypt's missile line-up comprises three models already deployed: Fog-7, Scud-B and Saqr-80; the latter is a missile with a range of 80 km, locally produced in cooperation with Iraq and possibly North Korea. In addition, since 1984 Egypt has been a partner to the much talked about Condor II-Badr 2000 program together with Argentina and Iraq; the program, designed to produce a missile with a range of at least 800 km and good accuracy, has been slowed down due to US pressures (6). Also, under development in co-operation with North Korea there is thought to be an upgraded ScudB version.

Iraq

In spite of recurring speculations, Iraq's nuclear capacity is believed to be many years away (7). Allegations that Iraq "may not become a nuclear producing country, but can be a nuclear -possession nation" seem discounted by 1989 IAEA reports (Iraq ratified the NPT in 1969) (8).

Iraq's capacity in both CW production and use is well documented. Mustard and nerve gases (Tabun and Sarin) are produced, stockpiled and deployed. Chemical warheads (probably being developed in co-operation with Egypt) would constitute the next step in Iraq's CW capacity.

The Iraqi missile force is believed to consist of 30 Frog- 7, 36 Scud B and two domestically upgraded versions of the Scud B, the 600 km al-Hussain and the 900 km al-Abbas, both employed against Iran in the 1988 so called War of Cities.

As for the missiles being developed, besides participation in the Condor II- Badr 200 program with Egypt and Argentina, on December 5, 1989 Iraq tested a new missile and announced the existing of another one.

The missile tested from al-Anbar base near Baghdad and named Tammuz I was in fact a rocket capable of putting a satellite into orbit and, therefore, a potential ICBM. The Tammuz is obviously a response to the Israeli satellite launch and demonstrated once more that Iraqi capabilities have been underestimated by the rest of the world; therefore, although unconfirmed, the announced existence of yet another missile, the 2,000 km al-Abid, should not be discounted (9).

Iran

In spite of ongoing efforts to revive its civilian research program, the Iranian nuclear program has been slowed down because of the changes in bilateral relations following the revolution; moreover, the plants suffered severe damages from the Iraqi air raids in 1985 and 1987. Therefore, although Iran has the political incentives 'to go nuclear', the acquisition of nuclear weapons on the part of this NPT party it is not anywhere near.

Iran is known to produce and stockpile CW, as it is suspected to have used them against Iraqi forces. According to Webster's testimony, "production of CW agents, including mustard, blood and nerve gases, began at a factory in the vicinity of Tehran in the mid-1980s with assistance from West European and Asian firms. The Iranian program is expanding. Agent-filled bombs and artillery shells are being stockpiled for battlefield missions" (Webster, 1989).

As for the Iranian missile arsenal, it includes an unknown number of: Frog-7, Scud B, improved Scud B (range: 400 kms) (10), Oghab, Nazeat, Shahin-2 (these short-range missiles -respectively 40 and 100-130 kms- were developed locally with Chinese assistance). While no long-range missile program is attributed to Iran, it is believed to be developing another short-range system: the Iran-130.

Libya

Libya's nuclear ambitions are well known as is the fact that they have been frustrated so far. A party to NPT, Libya is many years away from possibly building nuclear weapons indigenously.

The suspected CW plant at Rabta has been at the center of US and then European concern for some time. Before a blaze broke out on March 14, 1990, the US believed the Rabta plant was "the single largest CW production facility in the Third World, although it is smaller than the combined Iraqi capacity" (Webster, 1989); the plant was supposed to produce mustard and nerve gases as well as providing munition-filling facilities. The present state of the plant is uncertain (11).

Finally, Libya's missile capacities are limited at present (some 35 Frog-7 and 75 Scud B), but it is believed to be striving to acquire a longer range system, either from China, Brazil or private sources, that would enable it to target Israel as well as Southern Europe. None of these efforts have been successful so far, and the most promising program, the acquisition of the Brazilian MB/EE system, seems still far away.

Saudi Arabia

With the acquisition of some 20-60 CSS-2 from China, announced in March 1988 (the missiles may not be deployed yet), Saudi Arabia has entered the missile proliferators' family through the main door. In effect, the CSS-2 has as a range of much as 3000 kms, thus enabling Riyadh to target all of Iran, Israel and parts of the Soviet Union.

Nevertheless, this missile capacity is not highly significant in military terms, given the inaccuracy of the system and the fact that they are designed only for conventional high explosive warheads (unconventional warheads are not known to be possessed or sought by Saudi Arabia). The Saudi missile capacity, therefore, has a preeminently prestige and deterrence role, the latter being especially oriented towards Iran.

Moreover, in order to dispell regional and international concerns and pressures, Saudi Arabia has ratified the NPT and pledged not to transfer the missiles.

Implications for regional stability

The military level- The first conclusion to be drawn from the facts outlined above is that since the end of the Gulf war the Middle East region has entered a new stage of its long dated arms race. This new stage consists of two related aspects: 1) the relentless drive by the four main regional military powers (Egypt, Iran, Iraq and Israel) to acquire parity with each other in the local version of a 'triad' deterrent (nuclear weapons, chemical weapons, and medium - to long-range ballistic missiles); 2) the entrance of Saudi Arabia as a new actor into the regional military equation (Libyan attempts to do the same have been frustrated so far).

This new stage in the Middle Eastern arms race is disturbing because of the crisis instability it generates at its various steps of development and because of its effects on security developments outside the region (this latter aspect is discussed below).

As far as the regional balance is concerned, it could be said that as long as some kind of parity between the main opponents is not reached (or perceived) crisis stability remains fragile and the risks are high. Although political analysis may suggest that the probabilities of a war breaking out deliberately are low, it remains that the usual arrays of preoccupations about miscalculations, accidents, terrorist action and irrational behaviours are justified.

Moreover, it must be said that the establishment of a stable system of deterrence relationships is especially unlikely in the Middle East the multiplicity of actors and conflicts being the main but not the only obstacles to that.

Analysts from within and beyond the region have recently embarked in analysis about the effects of the recent military developments on the two 'hotter' regional fronts: Syria vs. Israel and Iran vs. Iraq. Their conclusions seem to converge on one point: unconventional proliferation is less destabilizing on the Gulf front because the depth of "the Iran-Iraq theater is too large for initial tactical gains to have momentous strategic consequences. Consequently, neither an opening missile strike nor a ground attack involving CW could decide the outcome of a new war, and this means that there is less incentive to employ these means or to prevent their employment" (Heller, 1990).

Since just the opposite is true on the Syrian-Israeli front, the introduction of unconventional means is considered particularly destabilizing in this case because it creates "a widening gap between the strategic options of one party (Syria), and the declining room

for manoeuvre of another (Israel)" (Navias, 1989).

Although this is not the place to comment on these analyses, it should be underlined that, as it usually happens, the assumptions on which they are based should be considered carefully before assuming they are correct. Just to give an example, the cited analyses seem not to consider some basic factors for the Syrian-Israeli case: e.g. the qualitative (as opposed to numerical) edge enjoyed by Israel or the existence of an Israeli nuclear capacity.

Also, the military significance of the unconventional means 'newly' introduced in the region should not be overestimated. The missile issue must be tackled within the technical context of a particular system's range, accuracy and payload, and very few countries in the Middle East can boast of deploying a missile system that successfully combines the three ingredients. While, for instance, the Saudi IRBMs can carry a non-conventional warhead for a long distance, this missile is not particularly accurate and the availability of the needed warheads can not be taken for granted. Similarly, the military efficiency of CW is known to be unpredictable and its value in combat is limited (12).

It is also noteworthy that none of the current analyses takes an Israeli-Iraqi confrontation into consideration.

In fact, if the effects of unconventional proliferation are evaluated in the context of the general military-strategic situation (including conventional weapons and systemic factors) it could appear that the overall correlation of forces among the Arab states and between the Arab states and Israel has not changed dramatically in the 1980s.

Incidentally, it can be noted that the more sophisticate regional military balances become, the more we see developing the kind of contradictory strategic analyses that has so far distinguished the East-West security debate. Experience from that debate should teach analysts, if not the concerned parties, to avoid the logic of the 'worst case' mentality, knowing, as we do, its negative effects on perceptions and, ultimately, on the arms race itself.

Nevertheless, reasons for concern and even fears remain and could be lessened only if and when existing source conflict in the Middle East is politically defused, and arms control and reduction measures are introduced in the region. The chances of attaining this safer state of affairs are not many, but the possibility does exist.

The political level

As elsewhere, the likeliness of the use of military force in the Middle East is dependent on the overall political developments. In this context, two trends seem to have emerged in the 1980s: on the one hand, a record of failure to achieve political objectives by military means; on the other, a deescalation of traditional interstate conflicts (Dessouki 1989).

As for Israel, its strategic aim of eliminating Palestinian resistance does not seem to have been well served by the use of force either at home (the intifada) or in Lebanon; also, both Syria and Israel have learned the limited use of military power in controlling Lebanon.

Finally, the exhausting 8-year Iran-Iraq war has brought the belligerents at least back to the starting point, if not to an even worse situation.

In a longer historical perspective, the Arab states seem to have realized that there is no military solution to their conflict with Israel and, with the qualified exception of Syria, do not seem orientated to use their military power in that context, if not as a bargaining chip on the long awaited diplomatic table.

Like the Arab-Israeli conflict, other traditional Middle East interstate conflicts have also been deescalated in the 1980s, thus permitting the restoration or creation of regional and sub-regional co-operation schemes. Now, "the nature of security threats in the Middle East is increasingly recognized as being domestic, developmental and non-military" (Dessouki, 1990).

Although there is no room for excessive optimism -(traditional conflicts, however deescalated are not solved and the 'new' security threats are especially intractable)- it can be stated that political incentives for the use of military force seem scarce, and this should mitigate the risks even in case of an acute crisis situation.

Thus, if this assessment is correct, there are some political grounds for trying to implement a set of policies that could mitigate the instability inherent in the current stage of the Middle East arms race.

Leaving aside for the moment the discussion of the general political and diplomatic efforts needed to bring about a solution to the new and old threats to security in the Middle East, the more specific issue of anti-proliferation and arms control actions will now be considered.

Existing arms control initiatives and their prospects

Nuclear- The pros and cons of the existing nuclear anti- proliferation regime -(a constellation of international treaties, institutions, codes, and bilateral nuclear-trade arrangements)- are too complex and well known to be elaborated here.

Probably less known is the proposal to institute a nuclear- weapon-free zone (NWFZ) in the Middle East. The Shah of Iran prosed to create such a zone in 1974; the proposal was subsequently adopted by the UN General Assembly. Interest in the proposal has been revived from time to time (for instance, after the 1981 Israeli bombing of the Iraqi Tammuz I reactor).

While the resolution does not define a zone, in 1985 Egypt said that "all concerned parties should belong to the zone, and should comprise, as a minimum, the Arab States, Israel, and Iran" (13).

Regarding the NWFZ the position of the main concerned parties is as follows:

Egypt: it was the first, after Iran, to call for its creation and has supported the idea ever since (in 1989 Egypt submitted yet another resolution about the zone to the UNGA, that adopted it). Its proposal requires that all parties to the zone adhere to the NPT.

Israel : in 1981 it called for the convening of a preparatory conference to negotiate a multilateral treaty for a ME NWFZ. It believes the negotiating should be done among the parties in the region (as for Tlatelolco) and that a NWFZ would inhibit local wars more than adherence to the NPT or unilateral adherence to IAEA standards.

Iran: it is unclear if it still supports the proposal launched by the Shah.

Iraq: it called for a NWFZ in April 1989, on the condition that all parties in the region, including Israel, accede to the NPT. Subsequently, the chief of the Iraqi delegation at the Geneva Conference on Disarmament specified that the zone should be free of all weapons of mass destruction (including chemical).

The United States: they are very interested in the process, but set five criteria: regional initiative; comprehensiveness; verification; no detriment to regional or international security; prohibition of all nuclear explosive, including PNE.

The USSR: its most recent position was expressed in Shevardnadze's speech to the Egyptian Parliament in February 1989 in which he called for the institution of a zone free of nuclear and chemical weapons as a step towards a more comprehensive system of confidence building measures (14).

Chemical- The negotiations that have been taking place within the UN Conference on Disarmament since 1968 for a ban on CW seem to be approaching a successful end. Like the NPT the future CW convention will be the central piece to an international antiproliferation regime comprising the Geneva Protocol of 1925 and multilateral (like the suppliers' code of the Australia Group) and unilateral actions. Moreover, a CW convention will probably be complemented by true disarmament on the part of the two superpowers.

However, given the spread of the relevant technology -due to its connection with civilian production- and given the existing weapons stockpiles, an effective CW ban needs an even more genuine co-operation of the parties than the NPT does. In other words, since a CW ban is even more difficult to enforce, its effectiveness depends to a larger extent on the consistency between its aims and the security needs of its parties.

It is this fact that makes the objections of the developing countries to the proposed antiCW regime worthwhile. These objections were voiced clearly at the 1989 Paris Conference and their most vocal supporters were the Arab countries (backed by Latin Americans). Apart from the usual protests against the egemonism of the 'North' countries (that want to keep for themselves the means of military and economic power), the Arab countries asked that a link is established between all means of mass destruction, and namely between nuclear and chemical weapons.

In effect, the Arab states see CW as an 'equalizer' vis-a-vis Israel's nuclear weapons (Ezz 1989; Dessouki 1990) and the fact that this is hardly true in military terms, seem to underline the deterrence value attributed to CW.

Regardless of any judgement on its substance, this attitude is relevant as far as it can hinder the fruitful implementation of any anti-CW regime by drawing many developing countries not to subscribe it or to subscribe conditionally.

A way out from this impasse could be an effort to create a nuclear and chemical weapons free zone in the Middle East. As mentioned before, the USSR and Iraq support this idea and Israeli prime minister Shamir has called at the UN in June 1988 for a CW free zone.

Delivery systems- The only existing multilateral initiative to restrict proliferation of delivery systems is the Missile Technology Control Regime (MTCR) agreed upon by seven Western nations (15) in April 1987. The primary goal of the MTCR, pursued through two sets of controls on technology exports, is to stop the proliferation of ballistic missiles capable of carrying nuclear weapons.

Although there is some evidence that the regime has slowed some Third World missile programs, it has several weaknesses. However, there is a consensus that the most effective way to address the problem of missile proliferation is by strengthening the MTCR, if only for lack of clear alternatives.

The main weaknesses of the existing regime are the following:

-it addresses only a category of delivery systems suitable for unconventional weapons, missiles of over 300-km of range and 500 kg (16), thus contributing too little to prevent the proliferation of shorter range and chemically armed missiles;

- all the participants have already been applying the MTCR in a relaxed or partial way; in particular: West European adherents have been unwilling, to date, to enforce the MTCR provisions in a stringent way, while US partiality vis-a-vis Israel is undermining the regime in several ways (17);

- the main obstacle to the MTCR however, comes from the non participation of many countries that possess just the kind of technology the MTCR strives to restrict: the USSR and China would be the most important partners to attract, but the reluctance of other European countries (like Belgium, Sweden, Switzerland) or of developing countries like Argentina or Brazil to join the regime is equally important.

In fact, as for CW disarmament or any other anti- proliferation regime, the larger the membership, the better. In this sense, besides adopting measures to strengthen the existing regime it would make sense to pursue the suggestions made by the USSR in favour of a new multilateral agreement, to be negotiated in the framework of the UN (at the CD ?), which could enlarge scope, means and partnership of the MTCR.

As for the Middle East in particular, the only regional arms control initiative concerning missile proliferation has come from the US. In December 1988 the Reagan Administration in fact proposed separate talks with Egypt and Israel in view of a regional initiative to limit fears of surprise attack and possibly reduction of missiles deployed. Since then, however, the idea has made no progress (the Soviet suggestions on regional arms control, discussed under the CW paragraph, seem to go very much in the same direction).

Conclusions

The ongoing US-led international effort to cope with the worldwide spread of unconventional weapons is problem-ridden. Nevertheless, the NPT, the MTCR and the hopefully forthcoming CW ban are important measures and, to date, the only existing means to cope with unconventional proliferation. Therefore these initiatives must be strengthened.

To this end the existing and future anti-proliferation regimes should not embody old style East-West rivalries: putting the treaties in the UN framework could be useful, and Soviet co-operation is a must. Moreover, these should be implemented vigorously and homogeneously by all adhering parts.

In addition to that, the existing and perspective regimes should be complemented by unilateral restraint and action, especially by the most interested parties: the US and USSR, which opened the gates to proliferation in the past and are still expected to respond to South-North threats, have an important role to play in this sense.

Restrain should be exercised vis-a-vis regional allies or partners whose military technology is already too developed to be constrained by the anti-proliferation regimes (Israel and North Korea fall in this category), while action -namely under the form of pressures to be brought in bilateral relations- should be exercised by all parties towards proliferators.

Finally, regional CBMs and arms control initiatives -too often object of scorn in the past- should be actively pursued. In this context, the US policy of supporting only regionally led initiatives in order to stimulate local action is undoubtedly wise, but should not be pursued too literally: since it is in our interest to see regional proliferation and military risks decreasing there is a price to pay.

Western European action in initiating regional arms control processes in the Middle East could be a good complement to superpowers' action; especially if it is geared toward low profile, technical actions such as facts finding, arbitrations and exchanges of information on water rights, maritime boundaries etc.

The security linkages

Unconventional weapons proliferation, especially in the Middle East, is connected to broader security issues in so many ways that, here, the linkages can be just briefly recalled:

East-West: the issues of proliferation influence the US-USSR and NATO-WPT arms control agenda in many ways. For instance: 1) the issue of Third world missile proliferation adds extra interests to the negotiation of short-range nuclear forces, since this would ban Frog, Scud and Lance missiles; 2) missile proliferation in the Middle East could revive interest in ABM as it is already keeping ATBM initiative alive; 3) the perceived growing threats from the South can produce smaller arms reductions in Europe (namely in naval forces) than it would otherwise be realized.

West-West: Intra-Western relations are and will be affected, as in the past, by different appreciations of causes and effects of Middle Eastern problems. In particular, differences in attitudes between the US on one side and Western Europe and Japan on the other regarding the trade between security and economic interests is especially disturbing in the context of anti-proliferation efforts. Different security perceptions between the US and Western Europe are likely to impinge in the East-West issue mentioned before. Finally, the whole question of how to handle out-of-area contingencies remains to be tackled in the framework of the new parameters of European security.

North-South: Unconventional proliferation poses new problems and reinforces old ones in the context of N/S relations. The main issues pending in the security sphere, already mentioned in the course of this paper, are: 1) the extension of the military reach of Middle Eastern countries; 2) the difficulties arising from establishing and maintaining anti-proliferation regimes. These concerns must be seen in the general context of N/S relations, where a group of countries (broadly coinciding with the proliferators) is on the whole increasingly less vulnerable to political and even economic pressures coming from the 'North'(Iraq is a good case in point).

South-South: As far as the Middle East is concerned, the effects and limits of unconventional proliferation have been considered in the preceding sections of this paper. It remains to be noted that 'horizontal' transfers of weapons and weapon technology are creating new alliances and antagonisms whose security implications are still to be fully understood.

NOTES

(1) The Sunday Times, 5 October 1986.

(2) See Jane's Defence Weekly, 25 November 1989, p. 1143; it must be noted that there are contradicting reports about the range of the Jericho II and IIB versions (see for instance Navias 1989 and Jane's, cit.).

(3) IISS The Military Balance 1989-90.

(4) The US-Israeli Arrow ATBM program formally started in July 1988, and in March 1990 the Secretary of defense made known that the US had offered Israel acquire the modified surface-to-air Patriot system.

(5) The Arms Control Reporter, p. 704.B.375, April 1989.

(6) In spite of their number, reports on the Condor II program are contradictory on the technical aspects. On 5 December 1989 Abdelkader Helmy, an Egyptian born rocket scientist, was sentenced in the US for illegal exports related to the program; in September the US State Department declared that "Egypt has terminated its co-operation" in the Condor program (Jane's Defence Weekly, 30.9.89, p.630)

(7) This assessment may have to be reconsidered in the light of the tentative of smuggling nuclear-triggers from the US, foiled in London on March 29, 1990.

(8) The Arms Control Reporter, p. 453.E.1, July 1989.

(9) The Arms Control Reporter, 706.B.24, Jan. 1990, quoting Iraqi sources confirmed by the US Defense Intelligence Agency on 8.12.1989.

(10) The existence of the an improved version of the Scud B in the Iranian inventory is a speculation reported by several sources (Edgar O'Ballance "The Military Balance in the Middle East and Maghreb", Middle East Strategic Studies, n. 3, 1989; "The global proliferation of ballistic missile", Jane's Defence Weekly, 23.12.1989).

(11) According to independent satellite reconnaissance the plant would have suffered only small damages (Le Monde, 21.3.1990).

(12) For a detailed analysis of this point see Robinson 1990.

(13) The Arms Control Reporter, A/40/442, 28.7.85

(14) TASS 23.2.1989.

(15) The seven original participants to MTCR are: the US, UK, Canada, West Germany, France, Italy and Japan; Spain joined in December 1989.

(16) "The 500 kg payload threshold is based upon the assumption that a nuclear proliferator's warhead will weight at least as much" (Karp, 1990, p.13).

(17) For details on West Europeans' attitude see IISS-Strategic Survey 1988-89 and Karp 1990, p.15-18; as for the US-Israeli case it must be said that US partiality, besides its direct political and military effects (see Karp 1990, p. 23-24), has important side effects as far as the Israeli government and privates are helping other proliferators around the world (China, South Africa..).

REFERENCES

DESSOUKI, Ali "The Changing Political Strategic Landscape in the Middle East", draft paper presented at the Heads of Institutes Meeting, Wilton Park (UK), Nov. 1989.

DESSOUKI, Ali "Unconventional Weapons and Regional Stability in the Middle East", draft paper prepared for the Institute for East-West Security Studies (IEWSS) Committee on Regional Arms Transfers and Arms Control in the Middle East, Wiston House (UK), Feb. 1990.

EZZ, Esmat "The Chemical Weapons Convention: particular concerns of developing countries", paper presented at the 39th Pugwash Conference on Science and World Affairs, Cambridge (MA), July 1989.

HELLER, Mark "Ballistic Missiles and Chemical Weapons in the Middle East", draft paper prepared for the IEWSS Committee on Regional Arms Transfers and Arms Control in the Middle East, Wiston House, Feb. 1990.

IISS (The International Institute for Strategic Studies) "Missile proliferation in the Third World", in Strategic Survey 1989-90, London, 1989.

KARP, Aaron "The United States and Soviet Union and the Control of Ballistic Missile Proliferation in the Middle East", draft paper prepared for the IEWSS Committee on Regional Arms Transfers and Arms Control in the Middle East, Wiston House, Feb. 1990.

NAVIAS, Martin "Ballistic missile proliferation in the Middle East", Survival, May-June 1989.

ROBINSON, Julian Perry "Chemical Weapons Proliferation in the Middle East", draft paper prepared for the IEWSS Committee on Regional Arms Transfers and Arms Control in the Middle East, Wiston House, Feb. 1990.

SPECTOR, Leonard The Undeclared Bomb, Ballinger Publ. Comp., Cambridge, 1988.

WEBSTER, William (Director, CIA) "Testimony on Nuclear and Missile Proliferation", Hearing of the Committee on Governmental Affairs and the Permanent Subcommittee on Investigations, US Senate, Feb. 1989.