

## *Also in this Issue*

The Unilateral Withdrawal: A  
Security Error of Historical  
Magnitude  
**Yaakov Amidror**



Economic Ramifications of the  
Disengagement Plan  
**Imri Tov**



Preventing the Proliferation of  
Biological Weapons:  
Situation Overview and  
Recommendations for Israel  
**David Friedman**



Israel's Defense Industry in the  
21<sup>st</sup> Century: Challenges and  
Opportunities  
**Sharon Sadeh**

## Curbing the Iranian Nuclear Threat: The Military Option

**Ephraim Kam**

### **The Suspension Agreement**

To date the crisis regarding the Iranian nuclear issue has been postponed, at least temporarily. Prior to November 2004 Iran was subject to considerable European pressure regarding its nuclear program, backed by a threat to send the matter to the Security Council, which would have to decide whether or not to impose sanctions on Iran for the violation of its commitments to the Nuclear Non-Proliferation Treaty (NPT). As a result of this pressure Iran was forced to retract its public decision of May 2004 to continue uranium enrichment, a decision that undermined a previous commitment to the European governments to suspend these activities.

The recent change in the Iranian position led to the signing on November 14, 2004 of a new agreement between Iran and leading representatives of the European Union, in which Iran renewed its commitment to suspend all activities related to the enrichment of uranium and the separation of plutonium. According to the agreement the suspension will remain in force for the duration of the talks, scheduled to begin in December 2004 between the European governments and Iran regarding a long term agreement. The long term agreement is intended to ensure that Iran's nuclear program will be used for peaceful purposes only. It will also include agreements regarding other nuclear matters and related tech-

# Editor's Note

## After Arafat

Despite the widespread perception that the end of the Arafat era in Palestinian politics creates some potential opportunity for a revival of the Israeli-Palestinian peace process, Yasir Arafat's departure from the scene in mid-November 2004 actually plunges the Palestinians and the rest of the region into a period of even greater uncertainty.

There is little basis on which to project likely future developments. It is true that the appointment of successors to the three main offices Arafat held – head of the Palestinian Authority, head of the PLO, and head of Fatah – proceeded fairly smoothly, and that new PA presidential elections have been scheduled for early January 2005. However, Palestinian political institutions and constitutional arrangements have not yet been put to a real test. Indeed, it is not even clear whether they will be of any relevance at all or whether – as some fear – matters will be decided in an extra-constitutional power struggle among

those with independent power bases or, perhaps even worse, not decided at all.

The most important unknown remains whether Arafat's successors will be willing and/or able to implement changes in governance and policy – the rationalization of the structure of Palestinian security forces, the confiscation of unauthorized weapons, and the suppression of hostile incitement in the media and the educational system – that Arafat himself was unwilling and/or unable to make as long as he held the reins of power.

Israel is obviously interested in the empowerment of a Palestinian leadership committed to the end of violence and the resumption of peace negotiations, but it is less clear what, if anything, Israel or others can contribute to the consolidation of such a leadership. On the one hand, actions that appear to reward Palestinian advocates of a less confrontational approach could enhance their authority and legitimacy in the contest with

those bent on carrying on the intifada of the past four years. On the other hand, Palestinian advocates of reform and an end to violence are already vulnerable to accusations of collaboration, and anything Israel or others might say or do could easily be portrayed as interference on behalf of favored candidates or “puppets,” thereby further eroding their authority and legitimacy.

It will be difficult, in the best of circumstances, for Israel to reinforce and encourage those it might prefer to see in power without exposing itself and them to charges of unwarranted interference in Palestinian affairs in order to “subvert” the “will of the people.” That dilemma may well impel the government of Israel to maintain a studied hands-off approach and to continue with its own plans for unilateral disengagement from Gaza, while exploring any opportunities that emerge for coordination with a new Palestinian leadership and other regional and international actors.

## Strategic ASSESSMENT

Volume 7, No. 3, December 2004

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The purpose of *Strategic Assessment* is to stimulate and enrich the public debate on the issues that are, or should be, on Israel's national security agenda.

*Strategic Assessment* is written by JCSS researchers and guests and is based, for the most part, on research carried out under JCSS auspices. The views presented here, however, are those of the authors alone.

*Strategic Assessment* is a quarterly published by  
the Jaffee Center for Strategic Studies at  
Tel Aviv University, Ramat Aviv, Tel Aviv 69978 Israel  
Tel: +972-3-640-9926 Fax: +972-3-642-2404

*Strategic Assessment* is published in English and Hebrew.  
The full text of *Strategic Assessment* is available on the Center's website:  
<http://www.tau.ac.il/jcss/>

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## Curbing the Iranian Nuclear Threat – cont.

nological and economic cooperation, as well as security issues.

The agreement signed is of considerable significance, at least in the short term. It indicates that Iran is sensitive to the international pressure applied to it, particularly when it encounters a united front poised against it, and it attaches importance to avoiding diplomatic isolation and the imposition of economic sanctions. Furthermore, the suspension of Iran's suspected nuclear activities, even for a few months, might effect additional postponement of its efforts to achieve nuclear weapons.

Nevertheless it is important to consider that the suspension will be temporary only, and that sooner or later Iran will almost certainly recommence its activities regarding the enrichment of uranium and/or the production of plutonium. There are several reasons for this assumption:

- The agreement is about temporariness: it calls for suspension, not termination, of the activities. Iran has explicitly presented its agreement to suspension as an expression of its good will, rather than as a legal commitment or because of an obligation related to the NPT. Iran has also hinted that in practice the suspension will last about six months.

- Although the agreement does not explicitly limit the period of suspension, it specifies that it will be linked to the duration of the talks between Iran and the European governments aimed at achieving a long term agreement. These talks are expected to raise issues that will be difficult to resolve, such as the supply of a light

water research reactor and nuclear fuel to Iran. This means that if the talks run into a dead end or are halted, Iran will feel free to renew the suspended nuclear activities.

- Iran had already – in October 2003 – made a commitment to the European governments, to suspend its nuclear activities. However, half a year later it announced that it was re-

**A nuclear capability would strengthen Iran's status as the mainstay of radical elements inside and outside the region.**

newing these activities because the Europeans had not honored their promise to supply it with nuclear technology and remove the Iranian nuclear issue from the International Atomic Energy Agency (IAEA) agenda.

It may therefore be presumed that the new suspension agreement does not reflect a strategic decision by Iran to cancel its nuclear weapons ambitions, rather is a tactical move on Iran's part intended to resist the heavy pressure it has recently experienced, and drive a wedge between the European governments and the American administration. If so, the crisis regarding the Iranian nuclear issue is liable

to re-emerge in the not too distant future. It is reasonable to assume that as long as it is confirmed that Iran is suspending its suspected nuclear activities, the matter will not be brought to the Security Council, and certainly sanctions or military steps will not be taken against it. If Iran once again enriches uranium, overtly or covertly, the US will renew its demand to bring the matter to the Security Council, with the intention of imposing sanctions. Yet the outcome of this scenario is unclear: while the European governments have threatened that if Iran does not agree to suspension they would support Security Council intervention, even if this happens a Security Council majority, necessary for the imposition of sanctions on Iran, is not guaranteed.

Should diplomatic pressure fail, the US is liable to consider seriously the possibility of taking military steps in order to halt the Iranian nuclear program. The US has in fact dropped hints in this direction. American leaders have announced in recent months that the administration is committed to preventing Iran from acquiring nuclear weapons, and that it is currently focusing on a diplomatic move, aimed at halting the Iranian nuclear program, while not ruling out other options. Neither has the administration concealed the military exercises and war games related to a military operation in Iran. Even after the agreement was reached in November 2004, senior officials declared that they do not view it as a strategic change in the Iranian approach, and announced that Iran had accelerated its uranium en-

richment activities prior to signing the agreement and was engaged in the development of nuclear warheads for its ballistic missiles.

A military option may also be considered in Israel, and remarks in this vein are more explicit in Israel than in the US. Prominent figures in the Israeli government and in the defense establishment have announced in recent months that they are waiting to see the results of the international pressure applied to Iran, but that if these prove insufficient Israel will have to rely on itself and take its own steps in its defense.

Against this background, it is important to evaluate the array of chances and risks related to an Israeli military operation against Iranian nuclear sites, and the considerations that should guide Israel in this matter.

## **Iran and Nuclear Weapons: The Significance for Israel**

Since the beginning of the 1990s Israeli leaders have assigned the Iranian threat a greater degree of importance. This is not only because of the Iranian regime's exceeding hostility toward Israel and Iran's increasing involvement in terrorism directed at Israel, but mainly because of Iran's clear and advancing efforts to acquire nuclear weapons. Many Israeli leaders regard the Iranian threat as the gravest strategic threat facing Israel, and some regard it as liable to endanger Israel's very existence in the future. At the root of this concern lies the fear that the likely acquisition of nuclear weap-

ons by the fundamentalist regime in Tehran, which calls explicitly for the destruction of the State of Israel, may result in the attempt to use these weapons against Israel.

Iran's possession of nuclear weapons is of major significance to Israel: a new situation would arise whereby for the first time since Israel's establishment an enemy state has capability of fatally wounding it. However, it is doubtful whether the Iranian regime would actually exercise a nuclear capability against Israel, despite its basic approach that rejects Israel's existence. Three reasons may alleviate the gravity of this threat.

The first reason is that, as far as can be judged, Iran's basic motive for aspiring to nuclear weapons capability is defensive-deterrent in nature. It seems that Iran decided from the first to develop a military nuclear capability as a counterweight to Iraq's capabilities regarding weapons of mass destruction, in particular against the background of the heavy blow sustained in the war against Iraq. At a later stage and in parallel to Iraq's weakening since the Gulf War, the Iranian regime's attempts to acquire nuclear weapons have been motivated by the increasing need it perceived to deter the US and, to a lesser extent, Israel, from directing their strategic capabilities against it. In the meantime there is no reason to assume that any exigency has undermined the primacy of the defensive-deterrent motivation to Iran. The Iranian Islamic regime, in contrast to Saddam Hussein's regime, has until now not displayed tendencies toward risky,

adventurous moves. The possibility exists that if and when Iran acquires nuclear weapons its order of priorities may change, and it may attach greater importance to a possible attack on Israel. Nevertheless, it may be assumed that as in the case of other countries that acquired nuclear weapons, Iran will regard this weaponry as a last card that may and should be played only when an extreme and immediate strategic risk exists. Iran apparently does not regard Israel as a country presenting such a threat, and its desire to destroy Israel is not an overriding interest justifying the use of nuclear weapons.

The second reason is American deterrence. Iran is well aware of its military weakness relative to that of the US, and the last scenario that it wants is a military confrontation between them. Iran is also aware of the strategic links between the US and Israel and knows of the American administration's commitment to Israel's security. Iran must therefore assume that a nuclear attack against Israel would result in very serious American retaliation, particularly if the US administration makes this clear in advance. Furthermore, Israel is regarded by Iran as a strong regional power possessing a large nuclear arsenal and therefore has a certain deterrent ability of its own toward Iran. Israel's capability of intercepting a nuclear tipped missile using the Arrow system and its second strike retaliatory capability in response to an Iranian attempt at a nuclear attack may be of significance to the Iranians, and this consideration may well lead

in the end to a balance of terror and mutual nuclear deterrence.

The third reason concerns the long term. In the last decade Iran has undergone a significant internal change resulting from a widespread demand, mainly among the younger generation, for extension of domestic personal and political freedom. This change is taking place slowly, with ups and downs, and in the last two years the strength of the proponents of change has ebbed. However, the demand for change is genuine and comes from below, and it may therefore be assumed that in the final analysis, at an unspecified time, a more moderate regime will arise in Iran that will be prepared to conduct a meaningful dialogue with the US and also perhaps with Israel. If this happens, then Iran's possession of nuclear weapons would be less threatening.

Yet even if these assumptions turn out to be correct – and this remains to be seen – and Iran does not attempt to employ nuclear weapons against Israel or against other countries, there are still real concerns regarding Iran's acquisition of nuclear capability. First, a nuclear-armed Iran is liable to behave in a more aggressive way toward various countries, including Israel, because of the feeling of self-confidence awarded by the nuclear umbrella. In Israel's case, this aggressiveness might be expressed, for example, through Hizbollah rockets fired against northern Israel, if and when Iran sees the need for this. Second, a nuclear capability would strengthen Iran's status as the mainstay of radical elements inside and outside the

region. It is also liable to cause moderate regimes in the region to align their policy more closely to that of Iran, and the strengthening of radical elements is in turn liable to harm the peaceful relations that Israel is striving to build with the Arab world. Third, the presence of nuclear weapons in Iran may well spur other countries in the region, such as Egypt,

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Syria, and Saudi Arabia, to try and develop their own nuclear weapons, and thus accelerate the nuclear arms race in the region. Iran itself might become a distributor of nuclear technology and materials to other countries.

This means that the acquisition of nuclear weapons by Iran would create an unprecedented situation regarding the capability of harming Israel. It may also aggravate some of Israel's security problems, by increasing their complexity, the capability of dealing with them, and the degree of uncertainty that Israel would be required to face. However, it is not inevitable that the Iranian threat will

increase to the point that it poses a viable endangerment to Israel's very existence.

## Deliberating an Attack on the Nuclear Facilities

Israel's attack on the Iraqi nuclear reactor in 1981 was a successful operation, at least from the military aspect. It achieved surprise, the reactor was seriously damaged, and the attacking air force unit returned to its base without casualties. Iraq was incapable of taking real retaliatory steps against Israel, and in fact did not respond directly, apart from launching missiles against Israel a decade later. Even the resulting international measures employed against Israel were moderate and temporary in nature. The attack's impact on Iraq's nuclear program is less clear. Although the attack disrupted the short-term development of Iraq's nuclear capability, in the long term it is possible that it stepped up Iraq's nuclear efforts.

An Israeli attack on Iran's nuclear facilities would occur under totally different and far more complex conditions. Some of these difficulties are obvious: the Iranian facilities are much further away from Israel than the Iraqi reactor; they are better protected; and some of them are located underground. It is impossible to damage Iran's nuclear capability comprehensively by attacking a single installation, as in the case of Iraq. In order to achieve comprehensive damage, it would be necessary to attack, based on accurate intelligence, at least three or four facilities associated with the uranium enrichment and plutonium



production. It is doubtful if a surprise attack akin to the Iraqi strike might be achieved, since the Iranians fear an Israeli attack and have taken it into account when planning its facilities. An attack on the nuclear power plant under construction in Bushehr – the flagship of Iran’s nuclear program, planned to become operational only in 2006 – involves another grave difficulty: hundreds of Russian engineers and technicians are working on the site and are liable to be harmed in an attack. At the same time, the role of the Bushehr reactor in acquiring nuclear weapons is not of the first importance, while an attack on a nuclear power plant is likely to incur substantial international criticism.

An additional military consideration is that Iraq is currently an operational theater of US and British forces. Large American forces are also deployed in the Persian Gulf. Any operation in Iran – in contrast to the attack on the Iraqi reactor – is liable to obligate prior coordination with the US, in order to avoid a clash with American forces. This coordination would also be required because Iran might well retaliate against American targets, and it will therefore be important to inform the US in advance of a strike.

However, the picture is even more complex. In contrast to Iraq of 1981, Iran’s development of nuclear capability has occurred on a greater scale and thus has reached a far more advanced stage. It seems that Iran is no longer fundamentally dependent on outside agencies for acquiring nuclear technology, and already possesses

most of the know-how necessary to produce fissile material. It possesses nuclear raw materials and produces centrifuges for uranium enrichment; it has conducted experiments in uranium enrichment and plutonium production; and it apparently harbors professional and skilled manpower in sufficient quantity and quality. This means that even if several major Iranian nuclear facilities were attacked, such as the centrifuges facility for uranium enrichment in Natanz, Iran would be capable of constructing replacement facilities in a short time. The construction of the facility in Natanz took about three years, occurring between 2000 and 2003. Given this experience, construction of a new facility, if not interrupted, is likely to take far less time.

Furthermore, the possibility cannot be ignored that Iran has already secretly constructed additional nuclear facilities that have not yet been identified to back up those discovered. It should be remembered that an important part of Iran’s major nuclear facilities – including the centrifuges facility in Natanz, the factories for production of the centrifuges, the laser enrichment plant, and the plant for manufacturing heavy water in Arak – were not known before 2001-2002. Since the centrifuge facilities and the factories used for producing them can be concealed in relatively small buildings, the possibility that such facilities already secretly exist is a real one, and is liable to leave Iran with a significant surviving capability even after the known facilities are attacked.

An attack on the facilities would

lead Iran to a crossroads regarding the continuation of its nuclear program. The attack might convince the Iranians that Israel and/or the US is determined to halt the program, even if it is necessary to repeat the attacks on facilities that would be discovered or rebuilt. However, there is a reasonable probability that the attack would not cause Iran to abandon its attempts to acquire nuclear weapons, at least as long as the present regime and the hostile relations with the US continue. Iran’s nuclear program is a national project and there is broad internal agreement regarding the need to continue it. Since Iran has already made considerable progress toward achieving nuclear weapons, an attack on the facilities may spur it into accelerating its efforts, as occurred in Iraq after Israel bombed its reactor.

The operation is also liable to present Iran as the victim of aggression, and in this way aid it to reject the international pressure and the demand for IAEA supervision. It may even permit Iran to cancel its signature to the NPT without having to pay a heavy price for doing so. The assumption that Iran will not halt its nuclear program even after an attack should lead to the conclusion that the best that can be expected is that an operation would delay the completion of the program for several years at least, in the hope that until then a more moderate regime, one that is willing to abandon the program in the course of a dialogue with the US, gains power in Tehran.

Iran has the capability of retaliating against Israel following an attack.

This capability is still relatively limited, and currently lies in three areas:

- Launching Shihab-3 missiles against Israeli territory. The missile is still not accurate, but is liable to be effective against large targets, unless intercepted by the Arrow system. Iran has already explicitly declared that it will retaliate by launching these missiles against Israel in the event of an attack on its nuclear facilities.

- Encouragement of the Hizbollah to operate its large rocket array against northern Israel, as well as further Iranian encouragement of the Palestinian organizations to increase their terrorist attacks against Israel.

- Perpetrating showcase terrorist attacks against Israeli/Jewish targets outside Israel.

Furthermore, an attack on the facilities would spark a long term conflict between Iran and Israel, so that an Iranian response might come immediately or after a significant period of time.

Finally, an Israeli attack that harmed Iran's nuclear program would serve the interests of many countries – the US, additional Western countries, and even Arab and Islamic countries that regard themselves as threatened by Iran. Nonetheless, serious criticism of such an attack can be expected, even on the part of countries concerned by Iran's nuclear ambitions. Some Muslim countries would regard such an attack as an act of aggression against the Muslim world in general, and this may well have a negative influence on what remains of the relations between Israel

and Arab and Islamic countries. Moreover, an attack of this sort would be regarded as a joint operation between the US and Israel, certainly if coordinated in advance, and is liable to contribute to increased hostility in the Arab and Muslim world toward the United States.

**The major burden of dealing with the Iranian nuclear threat – by both diplomatic and military means – must be borne by the US administration, and not by Israel.**

## Practical Conclusions

An overall assessment suggests that risks involved in an Israeli attack on the Iranian nuclear facilities outweigh the opportunities. An attack would have to take into consideration operational and other problems that are liable to impede success, while at the same time may spark an Iranian and international response, if only a limited one. Consequently, the conclusion is that Israel must permit the international community to make every possible effort to halt Iran's nuclear program by diplomatic means and to consign military steps to a last resort. This conclusion is particularly valid at the current stage, as long as Iran is obligated to honor its agreement to

suspend its suspected nuclear activities, since in this situation there is no international legitimacy for attacking the nuclear facilities in Iran. Obviously this approach incorporates a difficulty: the timetable for exhausting all diplomatic steps is limited to the point at which it will no longer be possible to prevent Iran from attaining nuclear weapons, and an accurate timetable is not known in advance.

This analysis does not attempt to reject categorically an Israeli military option as a means of halting Iran's attempts to achieve nuclear weapons. The existence of this option may also be of importance in intensifying the diplomatic pressure on Iran. However, there is a set of conditions essential to the success of a military operation; if these conditions are not met, it seems preferable that the operation not be conducted. The major conditions are:

- Obtaining an accurate intelligence estimate of the state of the Iranian nuclear program. The failures of the intelligence communities of the Western countries prior to the war in Iraq emphasize the vital necessity for presenting a firm estimate that Iran is in fact close to achieving nuclear weapons.

- Accurate intelligence regarding not only the known facilities but also the possible existence of unknown facilities. This intelligence must ascertain in advance that the attack would damage Iran's nuclear program for a significant period of time. If it transpires that following the attack the completion of the program is delayed by one or two years only, it is possi-

ble that the result does not justify the risks. It will also be necessary to take into account that the circumstances will not permit a repeated attack on major facilities that were not damaged in the first attack or that were discovered later.

■ An estimate of a high probability of success of the operation. The worst possible operational scenario is failure, which would encourage the Iranians to continue with their program out of a sense of immunity. This would involve a heavy price as far as Israel is concerned.

■ Achieving prior coordination with the US. Such coordination is important and perhaps even vital for execution of the operation, since the attack routes are liable to pass through areas of deployment of the American forces, and it is important to reduce the related risks. Coordination with the US is itself problematic: there is no certainty that the American administration would agree to such coordination, which brings with it its own set of risks, and it is not certain it would favor a military operation against Iran. Nevertheless, the possibility cannot be excluded that the ad-

ministration would be interested in Israel doing the dirty work, in order to present it as an independent Israeli operation and thereby reduce the risks of association with this operation.

■ International circumstances that would help to justify the operation, such as an Iranian announcement that it is canceling its signature to the NPT, and significant additional discoveries regarding its nuclear program, coinciding with diplomatic activities reaching an impasse. It is important that the Israeli operation not be regarded as disruption of the diplomatic efforts to halt the program.

Given the difficulties and risks involved in implementation of the military option, Israel must adopt the position that the major burden of dealing with the Iranian nuclear threat – by both diplomatic and military means – must be borne by the US administration, and not by Israel. There are two reasons for this: the Iranian threat is directed not only at Israel, but also at the vital interests of the US itself and at its allies; and the US is also likely to be better prepared to conduct a military campaign in Iran and to

cope with the ramifications and risks. In the final analysis, the handling of a problem of this magnitude must be the responsibility of a superpower and not a local country.

Finally, Israel must also prepare in advance for a scenario in which Iran will possess nuclear weapons, despite its efforts to prevent this. Such a scenario will obligate Israel to redefine its security concept and reevaluate the policy of nuclear ambiguity. Part of these preparations must involve an effort to reach agreement with the US administration that if Iran acquires nuclear weapons, the administration will clearly and explicitly declare that any Iranian nuclear attack against Israel or any other ally of the US would be regarded as a nuclear attack against the US itself and would prompt the commensurate response. Such a declaration must also make clear that the US will not tolerate even a threat of an Iranian nuclear attack against its allies. It may be assumed that such a prior declaration would form a principal deterrent against Iran and would help to mitigate the impact of an Iranian nuclear threat.

The Jaffee Center for Strategic Studies  
expresses its deep gratitude to

**Martin J. Whitman** (New York)

for the support he provided to the Center's Outreach Program,  
in the framework of which *Strategic Assessment* is published.



# The Unilateral Withdrawal: A Security Error of Historical Magnitude

Yaakov Amidror

## The Aims of the Disengagement Plan

On April 18, 2004, the Israeli government issued a general outline of its proposed unilateral disengagement plan from Palestinian territories. The government announcement correctly played down any advantages to be expected from the plan. It was claimed that “a better security situation, at least in the long term” will be achieved – a meaningless, vague statement.

The announcement did not mention the promises made by the former head of the prime minister’s office regarding a freeze of the situation in Judea and Samaria following the execution of the plan. On the contrary, the announcement claimed that the plan was created because “the stalemate dictated by the current situation is harmful. In order to break out of this stalemate, Israel is required to initiate moves not dependent on Palestinian cooperation.” Furthermore, “the relocation from the Gaza Strip and from Northern Samaria . . . will reduce friction with the Palestinian population, and carries with it the potential for improvement in the Palestinian economy and living conditions.”

It is true that dismantling settle-

ments and removing army units will reduce friction with the Palestinian population, an achievement that has great potential. Indeed, it is reasonable to assume that friction with the Palestinians would be mitigated in numerous areas between the Mediterranean and the Jordan River if Jews were evacuated from those sites. However, virtually all the experts agree that an expectation of improvement in the quality of Palestinian life is totally unfounded, since disengagement will prove disastrous to the Palestinian economy.

Furthermore, the claim that “the process of disengagement will serve to dispel claims regarding Israel’s responsibility for the Palestinians in the Gaza Strip” is unfounded from both the legal and diplomatic aspects. Clearly, as long as Israel guards the external perimeter of the Gaza Strip, and no one is permitted to enter or leave without inspection and approval, it will continue to be regarded as responsible for the fate of the residents there. In addition, the pressure to open entry and exit doors for the Palestinians will be substantial, and it is reasonable to assume that Israel will compromise security needs in order to ease the pressure. It therefore

seems that the Israeli government has not succeeded in producing a single serious argument that can refute objections and justify the grave step that it is taking.

At times when a diplomatic plan is proposed, it is difficult to estimate where it will lead from the security aspect, and even after some time has elapsed, the actual result may remain in dispute. There are also people who defend certain moves although reality differs entirely from what they envisioned. The correct approach to be adopted when analyzing diplomatic proposals, as in the case of the disengagement plan, is the analytical one that asks: What are the chances of improving the security situation after the disengagement, and what is the risk that this situation will deteriorate? This is not the place to present alternatives to the plan under discussion, but it is fitting to estimate the possible developments if the status quo were preserved, without execution of the plan.

Supporters of the unilateral withdrawal from the left of the political map assess the positive features along the lines of, “the disengagement plan offers an opportunity for the creation of a positive dynamic in Israeli-Pal-

estinian relations.” In other words, the disengagement plan may well be “the first stage of resolving the conflict with the Palestinians; the partner will be created if the Palestinians seize the opportunity and demonstrate a serious attitude to the first stage of the roadmap that must lead to the reduction of violence.”

Although the roadmap demands more vigorous and clear steps than simple “reduction of violence,” even those who are prepared to accept this minor gesture are called on to explain how it will be possible to persuade the Palestinians to reduce the violence after withdrawal from Gaza. Even after Arafat’s departure from the stage, is there any realistic chance that his successors will agree to fight against Hamas? Will they take any active steps to prevent its operations, and how will they dismantle the terrorist infrastructure or prevent its reinforcement?

Arafat demonstrated that he did not wish to take the required steps in order to weaken Palestinian terrorism capabilities, although the Israeli leadership demanded and expected this from him in 1994, when he and his cohorts arrived on the scene. Why should the Palestinian leadership act differently when Israel is withdrawing under the pressure of the very same terror, now that the Palestinians have made no pledge of any kind to Israel, in contrast to their commitment after the Oslo Accords? Obviously many of the Palestinian residents of Gaza desire quiet that will permit them to live normal lives. Yet will a withdrawal from Gaza that is per-

ceived as running away in fact strengthen their position in Palestinian society?

For a while it appeared there was a chance the Egyptians would enter the picture. However, this apparently was a false impression that resulted from lack of familiarity with Egyptian policy. It seems rather that Egypt would at most slightly increase its efforts, meager until now, to prevent the smuggling of arms into Gaza, and that it would aid in training the Palestinian security forces. Nor does the absence of the Egyptians from the picture permit an analogy with Lebanon. Syria is currently preserving the fragile equilibrium in southern Lebanon and preventing escalation on the part of Hizbollah – which some of us predicted would follow the IDF withdrawal – because it fears the price of a war in the north. Without Egypt, the Gaza theater does not appear to include a force that on the one hand would fear an Israeli threat, and on the other would be capable of forcing the Palestinians to halt the terror.

Consequently it is far from clear on what the supporters of the disengagement plan base their optimistic assumptions regarding the future.

## The Operational and Tactical Significance

Given this likely vacuum, an estimate must be made of what is liable to happen in the Gaza Strip itself, and what is the significance of transferring responsibility for the defense of the residents of Sderot, Ashkelon, and the western Negev to the Palestinians. At present, and as opposed to the stipu-

lations of the Oslo Accords, no one on the Palestinian side has made any commitment to combat terror.

Contrary to the argument sometimes aired in the Israeli press that Hamas prefers that Israel remain in Gaza, the aim of the organization is in fact to liberate the Gaza Strip and Judea and Samaria from any Israeli presence, and subsequently continue the long, hard struggle on the other side of the Green Line. Consequently it may be estimated that:

- The departure of IDF forces from Gaza may be disastrous at the tactical level. It may bring today’s Qassam rockets to the heart of Ashkelon, whose fate will become that of Sderot. If the range of the rockets increases, other towns will become additional targets.

- It is impossible to predict the ramifications of evacuating northern Samaria and whether a threat of rocket attacks against the center of the State of Israel will result. This will depend on the extent of the freedom of action given to the IDF in the region.

- The disengagement will cause a significant reduction in Israel’s ability to respond locally – both in Gaza and northern Samaria – to developments such as rocket attacks. This reduction will inevitably result from the expected deterioration of the level of intelligence and even more from the restricted freedom of action of the operational forces. The IDF will lose its capability of combating the chain of production and firing of the Qaasam rockets.

- It will be more difficult to de-

fend the line of the Gaza fence when on the other side there is no Israeli force capable of creating a real buffer zone.

■ If over the course of time Israeli control of the Philadelphi route becomes more tenuous, or if a sea port is constructed in Gaza or the Gaza airport becomes operational again, as promised in the Oslo agreements, then rockets that can reach Kiryat Gat and the southern outskirts of Ashdod can be smuggled in. Furthermore, surface-to-air missiles will also likely be smuggled in, curtailing the Israeli Air Force's freedom of action above Gaza or even in Israeli skies near the fence.

Thus, Israel is about to establish a state in Gaza, a state in which Hamas will have freedom of action and be joined by the umbilical cord to Hizbollah. When Israel no longer has the capability of closely supervising the sea and air borders of the Gaza Strip, the Lebanese model of the northern border recurs in the southwest, whereby rockets that boast a range of dozens of kilometers are perched on the dividing line and threaten Israeli towns. Israel will lose its capability of retaliating against terror originating in Gaza, just as it currently does not fight against terror coming from Lebanon: 80 percent of the terrorist attacks originating in Judea and Samaria are perpetrated by organizations receiving Hizbollah aid and financing, and Israel is doing nothing because of its fear of retaliatory rockets by Hizbollah.

It is impossible to know if the situation will deteriorate immediately and we will see the results in

Ashkelon in a few days, or if the threat will be realized at a later date, after international pressure has been applied to Israel to present the next program for withdrawal. It is reasonable to assume that Palestinian offensive capability will be built up under the umbrella of its control in the field, and the threat will be displayed in accordance with Palestinian needs. Israel

A war against  
terror is not for the  
impatient, and positive  
results emerge only  
after prolonged  
fighting.

will lack the capability of preventing or influencing the realization of this threat.

The escalation of terror since 1994, when Israel withdrew from the Gaza Strip, until the present gives a clear indication of what is likely to happen in the future, when the Strip will be an area off limits to critical Israel activity. Indeed, those who think that it will be possible to act on intelligence in the Gaza Strip with the same ease that the IDF enjoys today ignore the political constraints. After the withdrawal the IDF will be unable to operate in Gaza. Only if murderous terrorist activities originate from there over a long period of time will Israel

slowly, and after paying a bloody price, acquire the legitimacy to act again in the Gaza Strip. The terror that will be encountered by Israel in the future, if the Palestinians decide to employ it, will be far more sophisticated and less vulnerable.

## The War against Terror and Disengagement

The critical situation described above is all but certain, yet does not represent the gravest damage to be sustained. Even more serious is the likely possibility that the unilateral withdrawal will harm the deterrent concept that Israel (and the democratic world) is laboring to build in the face of the waves of global terror. By its action Israel will declare publicly that terror is a winning formula, and will thus spur the continuation of terror both at home and abroad.

The Palestinian war of terror erupted four years ago, at a time when Israel and the US president were prepared to hand over to the Palestinians the entire Gaza Strip including the Philadelphi route, the Temple Mount and most of the Old City of Jerusalem, and more than 90 percent of Judea and Samaria. Yossi Beilin's personal proposal was also on the agenda, in which Israel would absorb a significant number of refugees as part of an overall settlement. At no stage were the Palestinians prepared to avow that the agreement would form the end of the conflict and that they would not raise further demands.

Partly in an analogy with the IDF withdrawal from Lebanon several

months earlier, the Palestinians assumed they could overcome Israel by means of terror. Arafat was prepared to go to war even though in the negotiations with Ehud Barak he had scored tremendous achievements. The Palestinian state was about to be established with the blessing of the US and with the agreement of Israel; its capital would be East Jerusalem with its center in Haram al-Sharif - the Temple Mount. However, Arafat refused to accept the proposal, apparently since he was not ready to be the leader who ended the conflict, and he therefore did not agree to make a commitment that the Palestinians would have no additional demands in the future. In his view, as with many of his supporters who had seen the "salami technique" in action, the agreement was to be merely another stage in the struggle to destroy the State of Israel. It is therefore also clear why he could not consent to the generous quota of refugees that Beilin suggested would be allowed to return to Israel. Arafat contended that no restrictions should be placed on the number of refugees eligible to return, just as in effect no restrictions should be placed on the efforts to destroy Israel at a later stage. (Ironically, Abu Mazen declared recently that in the Camp David talks of 2000 Arafat was prepared to make greater concessions than he himself was.)

The tool employed to subdue Israel and force it to accept greater Palestinian demands was terror, which after the years of drawn-out fighting in Lebanon seemed an unbeatable tactic. Palestinians saw the IDF as hav-

ing fled from the Lebanese battlefield in disgrace, and Hizbollah leader Hassan Nasrallah urged the Palestinians to emulate his successes. Technical examination of the data reveals that the concept of Hizbollah success was unfounded. In the last seventeen months of its presence in Lebanon the IDF suffered twenty-one fatalities, all of them military personnel. From the perspective of a war against terrorist and guerilla organizations, the number is not "intolerable." For its own part, Hizbollah did not chalk up great achievements during that period. However, Israeli public opinion did not withstand the mounting domestic pressure to withdraw, and some regional leaders saw therein the beginning of a broader rift in Israeli society that would, under the same logic, play into the hands of the Palestinians. Although the withdrawal from Lebanon seems to be an Israeli success judging by the relative quiet in the north, the long term strategic message that emerged from the withdrawal caused great damage to Israel, especially in the Palestinian context.

When the intifada broke out while negotiations were continuing, the IDF and Israeli leaders failed to understand that Israel was facing a long confrontation. The prevailing theory was that Arafat resorted to violence in order to enable himself to display flexibility a short period thereafter. According to this approach, the war was a symbolic move to allow Arafat to point at independence achieved by force.

In contrast to the political misinterpretation, the preparations at the

tactical level proved adequate, and at the beginning of the intifada the IDF succeeded in foiling the Palestinian hopes of achieving victory by the masses over the "army of occupation." Yet when the fighting, which had seemed at first to be a more violent version of the previous intifada, evolved into a long, hard war, the situation became far more complex. Apparently Arafat was not seeking a better diplomatic agreement or a pretext for concessions, but was rather attempting to defeat Israel. Every civilian target was legitimate for terrorism purposes, and the terrorist infrastructure blossomed in the regions in which the IDF had lost control following the Oslo Accords.

As the terror evolved and escalated, the slogan "let the IDF win" emerged, even though there were those who argued that since there was no real terrorist infrastructure it was impossible to fight it using regular military forces. In fact, over the first eighteen months of the intifada, until April 2002, the IDF's hands were tied. The army learned the hard way that it could not fight against terror without controlling the area. Commanders began to realize that from the outside it was impossible to prevent terror without sparking serious friction with a civilian population that spawned, nurtured, and launched the terror.

Following the 2002 Passover massacre at the Park Hotel in Netanya, Operation Defensive Shield was launched, driven by the principle that the IDF was returning to the heart of the populated areas in Judea and

Samaria in order to regain military control of them. This complicated move did not bear immediate fruits. On the contrary, for a considerable time many people criticized the army for failing to produce results, since in practice the terror continued and the IDF seemed far from achieving a victory of any kind. Ultimately, however, the difficult lesson became clear, namely, that a war against terror is not for the impatient, and positive results emerge only after prolonged fighting – in the case of the intifada, over the course of about two years. This period saw construction of the separation fence, which proved of considerable benefit in the areas where it was erected. At the same time, it is clear that this alone is not a comprehensive solution, and even regions without a fence experienced a decrease in terror. IDF presence and the extensive use of targeted assassinations of terrorist leaders and activists led to a reduction in the number of attempted attacks. There was also a significant drop in the number of suicide bombings perpetrated inside the Green Line, with the General Security Services (GSS) and IDF proving quite successful in thwarting such attacks. The powerful combination of fewer attempts to execute terrorist attacks and the increased success in foiling such attempts created a new situation in which the scope of the terror declined significantly.

Israel was on the verge of an historic achievement. For the first time after many years a democratic country succeeded in demonstrating clearly that it was possible to combat

terror, without systematic decimation of the population of the kind perpetrated in Assad's 1982 massacre of the Muslim Brotherhood in Syria, and that it was possible to repel and defeat determined and cruel Islamic organizations that target civilians. In a world in which so many countries are engaged, albeit generally unsuccessfully, in a war against terror, Israel rep-

What Israel  
volunteered to do in  
Gaza will form the basis  
for a demand to do the  
same in Judea and  
Samaria

resented a leading, professional, and moral example. The IDF proved that when it was given the essential conditions, mainly to gain control of the area and eliminate the terrorist leadership, with the aid of excellent GSS intelligence it knew how to damage the terrorist capabilities greatly. It was again possible to show that there was no basis to the myth that emerged after World War II that an army cannot defeat terrorist and guerilla movements.

Israel was very close to victory. A military force can never eliminate the cause of a conflict between nations or societies, nor destroy the will of the opposing side. However, it was dem-

onstrated that military action may drastically reduce the capability of a terrorist organization to execute its plans. At the heart of terrorist infrastructures are the leaders, the commanders in the field, the operatives, and the laboratories, and they can be attacked. Israel successfully adopted the method of targeted assassinations to destroy the core infrastructure of the terror, i.e., terrorists having the greatest operational experience. Two years elapsed from the beginning of the Defensive Shield campaign until its results became apparent, because control is acquired over time when the area is occupied, and not by magic solutions. The army can only gain real control by a long, sometimes arduous process, while displaying determination and persistence.

The option of regaining control also applied to the Gaza Strip, but was rejected on the assumption that such an operation would be very difficult and would involve numerous casualties, both among IDF soldiers and among the local population. As long as firing continued at Sderot and its surroundings only, many people thought that the operations of Judea and Samaria should not be implemented in Gaza, even though on the eve of Defensive Shield there was considerable opposition to it in Judea and Samaria for the same reasons. Yet what will be the response when the firing from Gaza reaches additional cities in Israel?

The difference is now apparent between areas in which the IDF regained control after fighting (Judea and Samaria), and those in which it



remained outside and did not regain control (the Gaza Strip). Sderot, located near an area beyond IDF control since the implementation of the Oslo agreements but in which there is a fence, has become a border town suffering Qassam rocket attacks and paying for the lack of control with its blood. In contrast, in Judea and Samaria, with or without the fence, there is no high trajectory fire, and the other forms of terror are also slowly being eliminated by the IDF. Their potency is far less than in the past, and will decrease further after completion of the fence.

The IDF has reached a success rate of 80 percent in thwarting terrorist attacks originating in Judea and Samaria, and the terrorist leaders replacing those who have been arrested or killed are inexperienced youngsters who spend more time protecting their own lives than in perpetrating terrorist attacks. Of its own volition, Israel is about to surrender all these achievements and receive nothing in return.

## The Significance for the Future

After the unilateral withdrawal, which will be heralded by the Palestinians as flight (even if Israel proclaims that the decision was not caused by terror but by other reasons), it will be difficult to persuade anyone in the world in general and in the Middle East in particular that terrorism did not defeat the State of Israel. The victory of terror will become a myth that will influence the future, even if Palestinian diplomatic or tactical considerations dictate a lull in the

terror after the IDF withdrawal. There will perhaps be a large internal struggle among the Palestinians for domination and booty, but it will be clear who fled and who left the booty behind.

Today, even before the withdrawal is implemented, three quarters of the Palestinians in the territories believe that the decision regarding unilateral withdrawal reflects the victory of the terror imposed by the Palestinians. Hizbollah's Nasrallah will justifiably declare that after four years of warfare the Palestinians succeeded in realizing half of their dream, and there is no reason to think that in the coming years they won't achieve the other half, on condition that they continue to wage a protracted terrorist war against Israel. The Palestinian strategy will be clear: the creation of a threat against Israel's home front, while waging a terrorist and guerilla war under the protection of their umbrella that prevents Israel from retaliation.

Rather than standing at the threshold of a significant strategic achievement, where it is clear to the Arab side that Israel makes no diplomatic concessions to terror but continues to combat it successfully to the bitter end, the unilateral withdrawal will place us on the verge of a protracted confrontation, under far worse conditions, facing an enemy gaining momentum and strength because of its success. This is the nature of the missed historic opportunity.

It was interesting to listen to American officials who explained that the US was opposed in principle to the unilateral withdrawal because it con-

tradicts its strategic concept not to surrender to terror. In the end Jerusalem succeeded in persuading Washington to support the move in return for adding northern Samaria to the withdrawal and restricting construction in the settlements.

After giving up its achievements in the battle against terror and displaying its fear of international pressure, Israel has lost its status. The US was the first to realize this and it has increased the package of concessions to the Palestinians that Israel will have to pay as part of the plan. Even the Republican administration has made it clear that Israeli withdrawal from Gaza and northern Samaria is only the first stage in the process. The explanations of the former head of the prime minister's office that attempt to justify the withdrawal from a Rightist stance, as if by virtue of the withdrawal future pressure on Israel will be averted, are totally unfounded. The day after completion of the unilateral withdrawal the international pressure for continuation of withdrawal will begin, but this time the pressure will be even greater, because there will be a precedent of the evacuation of settlements and areas without receiving anything in return from the Palestinians. That which Israel volunteered to do in Gaza will form the basis for a demand to do the same in Judea and Samaria. US Secretary of State Colin Powell and the Europeans have said this explicitly.

On the other side we find the Left, which in the face of the unilateral concession justifiably fears the possible results. Those who for years con-

ducted negotiations and still believe that there is a partner for talks with Israel are opposed to the government's decision. It is clear to them that the chances that someone on the Palestinian side will agree to negotiate with Israel are now rapidly declining. If the Palestinians receive their demands by the force of terror without giving anything in return, not even a declaration, why should they agree to negotiations in which they will be expected to make concessions? Even if today there is no serious partner on the Palestinian side, the unilateral move is likely to delay the creation of one for many years.

However, the Israeli Left can claim one more victory for itself in its efforts to return Israel to the 1967 borders and dismantle the settlements in Judea and Samaria. For the first time in the history of Zionism the Israeli government has shattered a taboo and is uprooting settlements without external pressure and without receiving anything in return. The dam has been burst by the Right, and the Left will certainly widen the hole. Without doubt this precedent will serve Israel's enemies and "friends" in the future, whenever they will wish to extract concessions of this kind without demanding flexibility on the part of the other side. If the prime minister thought that his concessions would prevent pressure in the future, he is mistaken. On the contrary, an Israeli withdrawal without receiving anything in exchange will form the desired *modus operandi* for the Palestinians and their supporters in the

Western world, and from now on their task will be far easier.

## Conclusion

The proposed unilateral withdrawal contains a strategic, diplomatic, and military risk that has been described concisely by senior defense officials as "backing for terror." This expression has not merely a literal meaning, i.e.,

**An Israeli withdrawal without receiving anything in exchange will form the desired *modus operandi* for the Palestinians and their supporters in the Western world.**

rockets being fired against Ashkelon, but also a broader, deeper one, of historic surrender to the wave of Islamic terror and words of encouragement to the terrorists in the vein of "continue on your successful path." Spain fled from Iraq because of terror in Madrid, and the Israelis will be regarded as fleeing from Gaza for the same reason.

That which we found easy to analyze and condemn regarding Spain, we prefer not to understand in the Palestinian context. Flight from terror, even if it is called "unilateral withdrawal," remains flight, and its

results will be disastrous. Israel must remain where it is and make difficult, courageous decisions regarding regaining control of additional areas in the Gaza Strip in order to remove the capability of firing at Sderot. This is part of the IDF mandate.

If and when there will be someone to talk to on the other side, removal of settlements and the IDF presence can form bargaining chips in negotiations. The Israeli government, however, has played its cards without receiving anything in return, and therefore can only expect to experience more terror. This was explained better than anyone else by Prime Minister Sharon years ago when as an ordinary Knesset member he appeared at the Likud Central Committee and said, "Labor wants to hand over the Gaza Strip, and even among us there are people who voice similar opinions . . . The Jews have apparently forgotten why we liberated it twice, in 1956 and 1967, from the Egyptian occupier (which followed a previous attempt to do so at the end of the War of Independence that nearly succeeded). Why did we pay the price three times? Because the Gaza Strip threatened us when it was not in our hands. What is proposed is to abandon the security of Ashkelon, Kiryat Gat, Sderot, Netivot, and dozens of kibbutzim and cooperative communities."

At the time Sharon made an excellent analysis of the tactical danger resulting from the disengagement. The current strategic danger is even greater.

# Economic Ramifications of the Disengagement Plan

Imri Tov\*

## Introduction

On June 6, 2004, the Israeli government approved the plan for disengagement from Gaza and northern Samaria, which announced, "The State of Israel has come to the conclusion that there is currently no reliable Palestinian partner with which it can make progress in a two-sided peace process. Accordingly, it has developed a plan of revised disengagement . . . [to break out of] the stalemate dictated by the current situation."<sup>1</sup> A primary goal of the plan is to "lead to a better security, political, economic, and demographic situation," in part by reducing "friction" between Jewish and Arab populations through the dismantling of settlements.<sup>2</sup> The plan represents a diplomatic measure by the government supplementary to the ongoing military action to stop Palestinian violence. Furthermore, it aims to create a situation in which the Palestinian Authority (PA) is forced either to take action to institute an or-

derly regime in the Gaza Strip, or yield to another governing power.

The Israeli government has presented the disengagement plan as a political measure that reflects the lack of an alternative, rooted in the assessment that "there is no peace partner" on the Palestinian side. This plan is not designed for the economic sphere, and its objectives do not extend to this dimension of Israeli government policy. Nonetheless, disengagement is a political plan with economic consequences for the Gazan and Israeli economies. This essay will examine those consequences.

## Palestinian Economics and Terms of Disengagement

From September 2000 until the end of 2002, the overall Palestinian economic situation deteriorated. The negative trend was reflected in key indices, such as per capita GDP, per capita income, the number of jobs, unemployment, and the incidence of poverty among the population. This negative trend reached a peak in 2002 (figure 1).<sup>3</sup> In 2003, a change occurred in various general Palestinian economic indices, perhaps indicating a turning point in the negative economic

trends.<sup>4</sup> The improvement in the Palestinian GDP in 2003 is attributable to a fall in the level of violence, which resulted at least in part from the successful thwarting of attempted Palestinian violence within Israel. According to figures from the Palestinian Central Bureau of Statistics, the trend towards a moderate improvement continued in 2004 in Judea and Samaria, but contrasted with a sharp deterioration in the Gaza Strip. The unemployment rate in the first half of 2004 dropped to 28.6 percent in Judea, Samaria, and the Gaza Strip as a whole, but unemployment was 23.6 percent in Judea and Samaria, and 39 percent in the Gaza Strip.

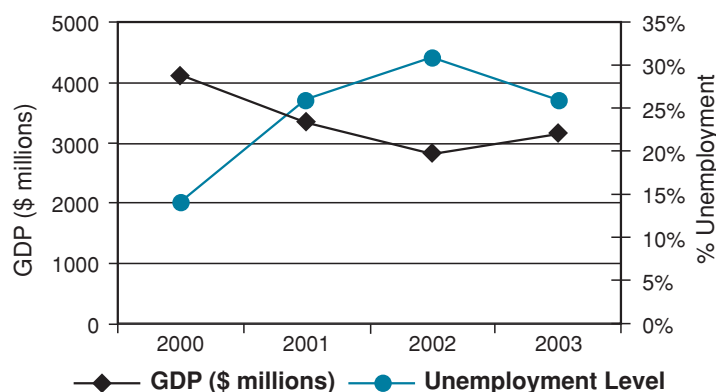
Israel's intensive military operations in the Gaza Strip in 2004, in response to the attacks on Jewish communities both inside and outside the Gaza Strip, disturbed the daily routine and economic activity in the region. The internal struggle that continued within the Gaza Strip between local organizations and factions also caused a slowdown in economic activity. Absence of order and security and administrative uncertainty detract from economic activity.<sup>5</sup> But it is the link between the level of military activity and the economic situation

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\* in conjunction with Noam Gruber.

**Note:** This article was written before the death of Arafat, and does not include an analysis of its effect on the disengagement plan.

**Figure 1: The Level of Violence in the Conflict in 2000-2003**



**Note:** The use of this data is aimed at representing the emerging trends, irrespective of the methods used to collect it and the definitions employed for that purpose.

**Source:** Israeli fatalities: General Security Services; Palestinian fatalities: B'Tselem (The Israel Information Center for Human Rights in the Occupied Territories).

that is the key to evaluating the possible economic consequences of the disengagement plan. An increase in the level of violence affects output and demand on the part of economic units.<sup>6</sup>

An analysis of the number of fatalities (figure 2)<sup>7</sup> in context of economic development statistics for the Gaza Strip (figure 1) demonstrates this trend between 2000 and 2003, indicating that Israeli military activity aimed at preventing terrorism and deterring the terrorist organizations caused damage to local economic activity. Conversely, a reduction in the level of violence accompanies signs of recovery.

Regarding disengagement, several important economic aspects are embodied in the Israeli government plan:

1. Israel retains control over the land and sea borders, and the airspace of the evacuated territory. It retains the

right to take preventive action within this territory for defense purposes.

2. Economic arrangements between Israel and the Palestinians already in place on the following issues will remain in effect, including:

a. the entry of workers to Israel according to the current number (36,000 in 2003, including 29,000 from Judea and Samaria and 7,000 from the Gaza Strip)

b. the movement of goods between the Gaza Strip, Judea and Samaria, Israel, and other countries

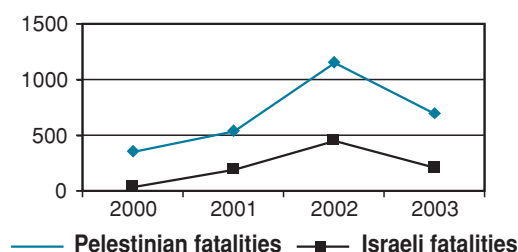
c. the monetary regime

d. tax arrangements and the customs area (collection will continue to take place in Israel, with the money being transferred to the Palestinian Authority)

e. existing arrangements regarding infrastructure (electricity and water supplies, communications, gas, and fuel for the Palestinians).

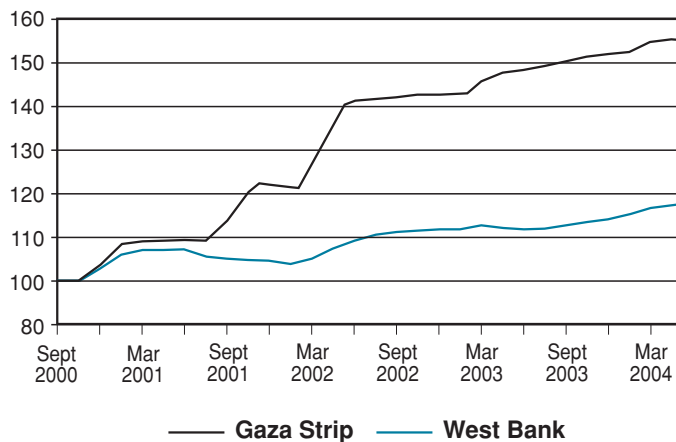
In addition, the plan's long term goal is to reduce gradually the number of Palestinians working in Israel, until they are excluded from the Israeli labor market.<sup>8</sup> It is doubtful, however, if this goal can be realized in the foreseeable future, unless violence in the Gaza Strip continues. The Israeli response to Palestinian violence has combined a suspension of commercial ties and counter-offensives. Yet under conditions of relative quiet, the demand in Israel for cheap, professional, and readily available labor will be as immediate as ever. Therefore, until other sources of employment for the Palestinians in

**Figure 2: Palestinian GDP and the Palestinian Unemployment Rate in 2000-2003**



**Source:** The World Bank.

**Figure 3: Transportation Costs Index**  
(September 2000 = 100)



**Source:** World Bank Report – West Bank and Gaza Update, August 2004.

the Gaza Strip are found, Palestinians will continue to attempt to find work in Israel, and relentless pressure on the Israeli government to open the border to allow workers entry into Israel can be expected.

### Possible Economic Offshoots of Disengagement

The disengagement plan is designed to achieve security and political disengagement, and stresses preservation of the current situation in economic activity. It is not designed to develop and improve the Gazan economy, or restore the level of activity to what it was before the conflict escalated in 2000. Nor is it designed to change directly the nature of current economic relations between the Gazan and Israeli economies, although the strength of the ties between the two is what will determine the future development of the Gazan

economy. Hence the importance of four economic ramifications of the disengagement plan, in addition to the arrangements mentioned explicitly in the plan: (1) lower transaction costs; (2) transferring assets to the Palestinians; (3) freedom of commercial traffic to Egypt; and (4) changes in foreign aid to the Gaza Strip.

#### *Lower Transaction Costs*

The escalation of the conflict with the Palestinians since October 2000 has increased production and market transaction costs. In particular the increase in military and criminal activity in the region generated a rise in transaction costs. Reducing friction between the Israel Defense Forces (IDF) and Palestinian residents following the exit of IDF forces from the Gaza Strip, and the creation of free internal movement within the Gaza Strip, will increase stability and cut local production costs.

World Bank figures show a rise in transportation and cargo shipping prices in 2000-04, a key element in the cost of doing business (figure 3).

Transportation prices rose 57 percent in Judea and Samaria and 20 percent in the Gaza Strip after September 2000, increases that resulted from Israeli and internal Palestinian military activity. Disengagement is likely to lower these costs to the level prevailing before the intifada, particularly in the Gaza Strip. Similarly, the escalating violence led to less internal economic activity, due to curtailed freedom of movement, closures, curfews, land confiscations, inaccessibility to and/or destruction of agricultural areas, local disputes, and uncertainty, all of which contributed to a rise in the cost of labor, raw materials, and the final product. Experts from the Palestinian Federation of Industries estimate the rise in the cost of doing business caused by the disruptions of free movement at 6-8 percent. Removing the disruptions should improve the manufacturing process by this percentage and reduce the annual damage to GDP in the region by \$70 million.<sup>9</sup> Implementation of the disengagement plan is thus expected to reduce, or even eliminate, the increase in costs, which in turn will provide an incentive to expand economic activity.

#### *Transferring Assets to the Palestinians*

Relinquishing Israeli economic assets from the Gaza Strip, as intended by the disengagement plan, has economic potential for the Gazan economy. Jewish settlements utilize 15



percent of the arable land in the Gaza Strip. Furthermore, much agricultural land has been confiscated or expropriated for the defense of traffic arteries used by the Jewish settlements. Transferring the land and infrastructure built by Israel in the region to the Palestinians is likely to boost local production in the Gaza Strip by 3-5 percent, amounting annually to \$30-50 million, according to World Bank estimates.<sup>10</sup> Releasing territories used as buffer areas and rescinding restrictions on cultivation of land around traffic arteries will increase the economic value of disengagement beyond the World Bank's estimates.

In 2002, 17 percent of the total number of employed Gaza Strip Palestinians worked in agriculture, and the agricultural sector accounted for 6.3 percent of the Palestinian GDP.<sup>11</sup> The addition of territories is likely to increase the number of Palestinians working in agriculture, and thereby reduce the level of unemployment in Gaza by approximately 8 percent.<sup>12</sup> The contribution to GDP and employment, however, depends on the ability to export at least some produce from the new agricultural area, since internal demand in the Gaza Strip will likely be insufficient to absorb the entire yield. The disengagement plan does not address the possibility of increasing exports from Gaza to Israel or by way of Israel. It is reasonable to expect this to occur, however, unless Israeli withdrawal is followed by an outbreak of terrorism. Another change is that most proceeds from crop production will be utilized within the Gaza Strip, not in Israel,

where the proceeds of Jewish residents in the area are now utilized. This should increase purchasing power in the region. Together with a moderation of Palestinian feelings of exploitation, this boost in purchasing power will have an expansive effect, although its results cannot be predicted.

An earlier version of the disengagement plan raised the possibility that the Erez industrial zone could remain after disengagement, although under a new framework.<sup>13</sup> The Erez industrial zone was once a model of Israeli-Palestinian cooperation, in which Palestinian workers remained in the territories and directly exported their output, not their labor. According to reports by the World Bank, approximately 4,900 Palestinians were employed in the zone in 2002-03, supporting about 3 percent of the population of the Gaza Strip. Palestinians owned half of the businesses there. Since the industrial zone became a target for terrorist operations, however, it was decided to close it and compensate the Israeli business owners. Closing down the zone permanently, combined with the disengagement plan, is liable to hamper the Palestinian-owned businesses by depriving them of the direct access to Israeli markets that they formerly enjoyed. It will harm the chances of reviving the zone in the future, and lower the possibility (mentioned in section 7 of the plan) of establishing a joint Palestinian-Egyptian-Israeli industrial zone on a common border of the Gaza Strip, Egypt, and Israel. It can be assumed that a long time will pass before such an idea becomes a reality.

### *Commercial Traffic to Egypt*

Freedom of movement for commercial traffic to Egypt from the Gaza Strip is an important development likely to result from Israel's withdrawal from the Gaza Strip. It would replace the current commercial route, which passes through Israel. The Israeli economy, in terms of demand and physical and financial infrastructure, now constitutes the outside world for the Gazan economy. The Israeli labor market is a natural market for the Gazan work force, and Israel serves as a natural market for the agricultural and light industrial output from the Gaza Strip. It is also the outlet to international markets: Israel's air and sea ports are currently the only route for business activity with the outside world. Even now, the Israeli economy is the source of most of the inputs that the Gaza Strip needs for consumption and investment.<sup>14</sup> Opening a direct and easy route to the Egyptian economy (and to Europe, through Egyptian seaports) is likely to facilitate the formation of an alternative to the Israeli market for the Gazan economy.<sup>15</sup>

At the same time, neither the Egyptian nor the Jordanian economy can immediately replace the mutually complementary relationship between the Israeli and Gazan economies. The Egyptian and Jordanian economies, which are labor intensive and lack capital, essentially resemble the Palestinian economy, and therefore compete with it more than they complement it. Only after a long process of discovery and cultivation of the relative advantages of the Gazan

economy vis-à-vis the Arab economies can the Gazan economy develop substantial exports to the Arab world. It is doubtful whether exporting labor, common from Gaza to Israel, can take place between the Gaza Strip and other neighboring countries. Development of relative advantages is more likely in exports to Europe, but this option will also require a restructuring of the foundations of the Palestinian economy in order to cope with competition from exports to Europe from the Far East.

If the disengagement plan aggravates restrictions on the passage of workers and goods from the Gaza Strip to Israel, and if complete separation between the areas is created as a result of Israeli security considerations, alternative economic ties resting to a large extent on the Egyptian and Jordanian economies will become necessary, under conditions inferior to those that formerly prevailed in the Israeli economy.

### *Changes in Foreign Aid*

The other change likely to emerge following disengagement lies in the designation of foreign aid to the PA in general, and to the Gaza Strip in particular. Since 2000, total international aid to the PA has grown: both actual payments and pledges have increased. Over the past four years, however, two adjustments altered the character of foreign aid from an economic standpoint (table 1). First, the proportion of the aid devoted to investment in development has declined, with more aid increasingly channeled to humanitarian purposes

**Table 1: Changes in the Amount of Foreign Aid to the PA (in US \$ millions )**

	1999	2000	2001	2002
<b>General aid (development)</b>	692	852	473	261
<b>Emergency aid and budgetary aid</b>	0	121	755	1266
<b>Total commitments</b>	692	973	1228	1527
<b>Total payments</b>	482	549	929	1026

**Source:** World Bank report – “Twenty-Seven Months – Intifada, Closures, and the Palestinian Economic Crisis,” May 2003.

– from 14 percent in 2000 to 80 percent in 2002 – to provide residents with a minimal subsistence. Such aid makes no direct economic contribution to long term development. If financial transfers by Islamic organizations aimed at assisting military activity are added to the official figures, the proportion of financial transfers directed to purposes other than economic growth increases. Second, the percentage of financial commitments met through actual payments dropped.<sup>16</sup>

The World Bank believes that a considerable proportion of foreign aid currently channeled to welfare because of the economic distress in the Gaza Strip will be redirected to investment in infrastructure and profit-making investment following a successful disengagement. Such a change, should it take place, could contribute to GDP growth and a real increase in per capita income.

It is difficult to determine in advance the response of the Islamic organizations transferring money for the support of terrorism once the disengagement, designed to reduce the reasons for terrorism, occurs. It can-

not be ruled out that the internal struggle for control of the Gaza Strip will result in continued use of money from the organizations for welfare purposes and for financing the operations of the organizations themselves rather than overall economic development.

### **Potential for Improvement**

The improvement in the Palestinian economy that began in 2003, especially in the Gaza Strip, compared with the negative trend following the outbreak of violence in 2000 (as well as the reversal of 2004 in Gaza), suggests that if the disengagement plan leads to a significant decline in the level of violence, a further marginal improvement in the Gazan economy is likely. It should not be expected that this improvement will immediately return the economy to its 1999 level. Such a recovery is possible only in conditions similar to those prevailing at that time, and these conditions must be stable and non-random, for example, work permits in Israel for a large number of Palestinian workers from Gaza, and large scale interna-

tional investments in export-oriented industrial infrastructure. Nevertheless, the disengagement plan has the potential to set in motion a process of improvement in the Gazan economy.

Israeli disengagement, however, does not guarantee realization of the marginal economic potential, and realization largely depends on the response by the Palestinians and their institutions. Indeed, there are a number of serious obstacles to realizing the economic potential of the disengagement plan, but significantly, they involve security and politics more than economics.

■ **Israel's withdrawal does not guarantee a stable regime** that will allow economic mechanisms to operate. Should the violence directed against the Israeli presence transform into a violent internal struggle for control of the Gaza Strip, it will leave the Palestinian economy in crisis conditions and prevent deriving the economic benefits of disengagement.

■ **Failure to observe the military arrangement** of disengagement is a serious risk. If Israeli communities bordering the Gaza Strip are shelled or attacked with high-trajectory fire, Israel will attempt to reduce the damage to its communities by sending the IDF into Gaza. In this case, the Palestinians will have gained settlement land, but under these conditions the economic contribution to Gazan production will be doubtful, due to an inability to market their produce.

■ **Refusal on the part of donor countries** and international investment groups to allocate resources for investment in the Gaza area may re-

sult. Possible reasons for such refusal include concern about non-peaceful relations with Israel, internal violence caused by a power struggle, and lack of confidence in the ability of those in power to guarantee that the money is channeled and used according to the donors' wishes. Furthermore, it cannot be ruled out that donor countries will attempt to pressure the parties by preventing the flow of money for investment purposes, in order to bring about discussion of a broader arrangement than unilateral disengagement.

■ **Concern on Israel's part** about opening the Gazan borders to the passage of goods and labor might be compounded by a **refusal by Egypt** to help create a long term alternative to the Gaza Strip's economic connection with Israel.

## Disengagement and the Israeli Economy

On the domestic front, the disengagement plan is designed to set in motion two main processes with immediate economic significance: payment of compensation to evicted Jewish residents, and redeployment of the IDF outside the borders of the Gaza Strip.

### *Compensation to Jewish Residents of the Gaza Strip*

The compensation plan for those evicted from the Gaza Strip includes three elements: (1) compensation for loss of property and termination of residence in the area, (2) compensation for loss of livelihood and employment, and (3) incentives for moving to areas of high national priority.

Planned spending on compensation is \$200,000-500,000 per family.<sup>17</sup> Those evicted are entitled to demand a valuation by an assessor. The average compensation per family will likely near the upper limit of \$500,000 now under discussion. It therefore appears that the overall sum to compensate for the dismantling of Jewish communities from the Gaza Strip will be NIS 5-7 billion. That is a considerable sum – over 1 percent of the Israeli GDP.

The civilian cost will be paid through the state budget, with the possible exception of money provided to those evicted in the form of long-term credit through bank loans and government guarantees. The increase in the budget deficit is difficult to estimate at this stage on the basis of official figures.<sup>18</sup> Nevertheless, it appears that the Ministry of Finance will either distribute the expense over more than one fiscal year, or has already included it in existing budget items that contain various reserves. Furthermore, it cannot be ruled out that the basic plan will be executed as some type of agreement between Israel and the Palestinians, in which case it is possible that either US aid will be obtained, despite denials that this will occur, or that some other international aid will be found.<sup>19</sup>

In view of the above, it appears that the government's macroeconomic plan will not be affected. Spending on compensation for those evicted from the Gaza Strip will not require significant changes in the budget. The way in which the compensation money is utilized, however,

is likely to have economic significance. Channeling the compensation money to the domestic market as an addition to existing local demand will not alter basic processes in the Israeli economy. Yet if spending is concentrated in one region (the Galilee, Jerusalem, or the Negev), or on one field of activity (residential construction or financial investment), it is reasonable to assume that significant change will occur in that specific region or field. Use of the compensation funds for leverage regarding a given region or economic sector is likely to have broader economic significance.<sup>20</sup>

### ***IDF Redeployment***

Deploying the IDF on a line outside the Gaza Strip, which includes the withdrawal of the police and other services, is liable to cost NIS 1-2 billion. How much of this amount will be budgeted by the Ministry of Finance, and under which fiscal years? How much will replace the regular budget, and how much will be in the form of a budget supplement for the Ministry of Defense? These questions are under negotiation between the Ministries of Finance and Defense, and answers are apparently still unavailable. Solutions, however, will almost certainly be part of the debate over the state budget for 2005. Discussion of the allocation for a change in deployment is expected to focus on two issues. One is whether the redeployment of the IDF can be expected to save money, and if so, how much. The other is which defense spending that has already been allocated can be diverted to pay for redeployment,

without affecting other needed activity. Discussion of the IDF redeployment budget may also be separated from the discussion of the budget for the next fiscal year, and the solutions to be presented by the two ministries will not alter the overall budget deficit.

## **Conclusion**

If the disengagement plan substantially reduces violence in the Gaza Strip, it is likely to bring an immediate marginal economic improvement, but this clearly depends on the validity of the plan's working assumptions. In any case, the plan is not designed to restore the Gazan economy to its pre-intifada status. Even if the disengagement plan does not bring about an absolute and immediate recovery, however, it has the potential to create a process of improvement in the Gazan economic situation.

Implementing the disengagement plan with determination and adherence to its basic outline, regardless of political opinions about the removal of Jewish settlements, will give the impression of a government that is in control of the Israeli economy, knows what it wants, and acts decisively to achieve its objectives. Markets are inclined to respond positively to decisive action on the part of the government, and to persistence in action to carry out intentions. If the disengagement plan is successful in lowering the level of violence against Israelis, and if the government acts with determination to complete its plan according to its main guidelines, then economic units will operate in a more

stable business environment.

The economic consequences of the plan for the Israeli economy are solely the result of changes in the political environment. If, however, the political environment changes according to the parameters included in the plan, the plan will have only a marginal macroeconomic impact, given the other processes taking place in the Israeli economy.

## **Notes**

1. From the disengagement plan of May 28, 2004, approved by the government on June 6, 2004, <http://www.pmo.gov.il/nr/exeres/C5E1ACE3-9834-414E-9512-8E5F509E9A4D.htm>.
2. The plan approved on June 6, 2004 stipulates that the government must specifically approve the evacuation of each group of settlements before the evacuation occurs, but it is clear that without the dismantling of settlements, the plan has no significance. Similarly, it appears that the prime minister's aim in promoting the plan is to remove Jewish residents from the Gaza Strip and northern Samaria, hand the territory over to the Palestinians, and station the IDF around the Gaza Strip as an external shield.
3. Palestinian GDP in 2002 was only 62.8 percent of its 1999 level (\$2831 million, compared with \$4179 million, a 40 percent drop). The unemployment rate rose two and a half times (31 percent, compared with 12 percent in 1999 in the territories as a whole; in the Gaza Strip, the unemployment rate rose from 17 percent to 38 percent). The percentage of those under the poverty line grew from 20 percent to 51 percent, and from 32 percent to 68 percent in the Gaza Strip.
4. GDP grew by 6.1 percent, from \$2831 million to \$3144 million. The unemployment rate fell from 31 percent in



- 2002 to 26 percent in 2003, and from 38 percent to 29 percent in the Gaza Strip. The poverty rate declined from 51 percent in 2002 to 47 percent in 2003, and from 68 percent to 64 percent in the Gaza Strip.
5. The conclusion is reinforced by the lists of Palestinian fatalities in 2004, the vast majority of whom were residents of the Gaza Strip. See figures from the Palestinian Human Rights Monitoring Group, [www.phrmg.org](http://www.phrmg.org).
  6. Several studies in Israel and around the world demonstrate a link between the level of violence and the level of economic activity in the short term. See, for example, Imri Tov, ed., *Defense and Israel's National Economy: Exploring Issues in Security Production*, Memorandum no. 62 (Tel Aviv: Jaffee Center for Strategic Studies at Tel Aviv University, 2002), pp. 69-71; Imri Tov, "Economy in a Prolonged Conflict: Israel 2000-2003," *Strategic Assessment* 6, no. 1 (2003): 20-25; Daniel Tsiddon and Zvi Eckstein, "Macroeconomic Consequences of Terror: Theory and the Case of Israel," Sapir Center discussion paper, no. 3, 2004; Alberto Abadie and Javier Gardeazabal, "The Economic Costs of Conflict: A Case Control Study for the Basque Country," *American Economic Review* 93, no. 1 (2003): 113-32; Estaban Rossi-Hansberg, "Cities Under Stress," *Journal of Monetary Economics* 51, no. 5 (2004): 903-37.
  7. The level of violence is represented through the number of Palestinian fatalities from Israeli military action taken in response to terrorist attacks in Israel. The logic linking the two sets of data is Israel's response to terrorist attacks within Israel. A terrorist attack in Israel stimulated a violent response.
  8. Section 10 of the disengagement plan reads, "In the longer term, and in line with Israel's interest in encouraging greater Palestinian economic independence, the State of Israel expects to reduce the number of Palestinian workers entering Israel, to the point that it ceases completely. The State of Israel supports the development of sources of employment in the Gaza Strip and in Palestinian areas of the West Bank, by international elements."
  9. "Palestinians Fear Disengagement will Worsen Poverty," *Globes Online*, April 8, 2004, [http://www.globes.co.il/serveen/globes/docView\\_Archive.asp?did=787269](http://www.globes.co.il/serveen/globes/docView_Archive.asp?did=787269).
  10. "Disengagement, the Palestinian Economy, and the Settlements," World Bank, June 2004. In our opinion, the World Bank has underestimated the effect.
  11. World Bank figures ([www.worldbank.org](http://www.worldbank.org)) and the Palestinian Central Bureau of Statistics ([www.pcbs.org](http://www.pcbs.org)).
  12. Assuming that the same number of Palestinians are employed in the areas of the evacuated Gaza settlements in the same proportion as in the Palestinian economy of 2002, an addition of 5 percent to GDP means an 8 percent reduction in unemployment in the Gaza Strip. The formula used for the calculation is the rate of workers in agriculture, divided by the contribution of agriculture to GDP, times 5 percent, times the employment rate in the Gaza Strip.
  13. The disengagement plan, approved on June 6, 2004, section 7, states "The area of the Erez industrial zone will be transferred to the responsibility of an agreed Palestinian or international party." A previous version of the disengagement plan, of April 15, 2004, stated, "Israel will consider the continued operation of the zone on the current basis, on two conditions: (i) the existence of appropriate security arrangements (ii) the express recognition of the international community that the continued operation of the zone on the current basis shall not be considered continued Israel[i] control of the area," <http://www.pmo.gov.il/nr/exeres/939E3D2E-1621-4AA9-A6DF-174AE7441DA2.htm>.
  14. In 1998, imports from Israel accounted for 75 percent of Palestinian imports, and exports to Israel accounted for 96 percent of Palestinian exports. See Claus Astrup and Sebastian Dessus, "Trade Options for the Palestinian Economy: Some Orders of Magnitude," The World Bank, Office of the Chief Economist, Middle East and North Africa Region Working Paper, series no. 21, March 2001.
  15. See also Gil Feiler, "Economic Aspects of the Israeli-Palestinian Conflict," BESA at Bar-Ilan University, July 2004.
  16. In the absence of other information, we have assumed that actual payments are distributed in the same proportions as commitments.
  17. "Compensation Law: Voluntary Evacuees will Receive Advance Payments this Week," *Ynet*, September 13, 2004.
  18. The Minister of Finance's assumption, published in the press, that the deficit caused by spending for the disengagement plan will increase the planned budget deficit by 0.4 percent of GDP contains no information requiring a change in the Israeli government's macroeconomic plan.
  19. External financing passing through the state budget will increase the formal budget deficit, but funding through institutions not appearing in the budget, such as the Jewish Agency, will not have that effect. The practical economic significance is the same, regardless of the attempts to bypass the restriction on the budget.
  20. In the draft Compensation Law, the government intends to encourage the evicted residents, 1300-1700 families totaling 7500 people, to move to national priority region in the Negev or the Galilee. Residents moving to these defined areas will receive a NIS 90,000 loan, which will become a grant after five years of residence. See draft Compensation Law, Section 3.2.6, *Haaretz*, September 14, 2004.



# Preventing the Proliferation of Biological Weapons:

## Situation Overview and Recommendations for Israel

David Friedman

### Introduction

The events of September 11 and the wave of anthrax-laced envelopes mailed in the US during 2001 – a case that still has not been fully solved<sup>1</sup> – together constituted a watershed in the perception of the non-conventional terror threat in general and of bioterrorism in particular. They served as a milestone in the recognition by Western countries, led by the US, of the immediacy of the threat and the need to fight it. These events heightened the potential link between international terrorism and Weapons of Mass Destruction (WMD), with biological weapons in particular looming as a new and dangerous threat.<sup>2</sup> Several reports recently published in the US on the threat of biological terror conclude that the dramatic developments expected in the twenty-first century in the field of life sciences, along with the accessibility and widespread dissemination of information, will enable terrorist organizations to obtain and prepare biological means capable of causing enormous damage.<sup>3</sup>

At the same time that it has evinced a heightened awareness of the non-conventional terror threat, the

international community has undergone certain political-strategic processes that have somewhat mitigated the inter-state WMD threat, particularly its biological and chemical manifestations. Significant here is the dissolution of the USSR and its decision to join in the process of signing disarmament agreements and cooperate with the US in dismantling and destroying non-conventional weapons stockpiles. Also noteworthy is the war in Iraq and the elimination of an Iraqi non-conventional threat.

The US war against terror includes the fight to prevent the possible use of non-conventional weapons by terror organizations and minimize or preempt the consequences should terror organizations resort to such weapons. The all-out war on terror, based on the four premises of *deterrence, prevention, defense, and consequence management*,<sup>4</sup> has commanded considerable US effort and resources. The US has made important organizational changes, primarily the establishment of the Department of Homeland Security (DHS), whose main task is specifically the fight against terror.<sup>5</sup> It has also toughened existing laws and enacted new legislation intended to fight

against terror in general and against non-conventional terror in particular.<sup>6</sup> European nations, both independently and through the European Union, have declared formal support for the US approach, but in practical terms have acted with noted moderation and little resolve. The only exception is England, which generally is in agreement with the US on such matters.

This article addresses the issue of preventing/minimizing the proliferation of non-conventional weapons, equipment, materials, and technologies to hostile elements, particularly terrorist organizations. The article will focus on policy and legislative processes in the US and other Western countries designed to prevent the proliferation of non-conventional weapons, particularly biological weapons, and assess the situation in Israel in terms of regulations that exist and what remains to be done.

### Arms Control and Counter-Proliferation

The Biological Weapons Convention (BWC), which entered into force in 1975, joins the Nuclear Non-Proliferation Treaty (NPT) and the Chemical

Weapons Convention (CWC) to constitute the principal conventions on arms control and nonproliferation of non-conventional weapons. The BWC is a convention that prohibits the development, production, and stockpiling of bacteriological (biological) and toxic weapons and binds the signatories to destroy those that exist. The main weakness of the convention is the lack of a built-in control mechanism for enforcement and guaranteeing compliance by the member states, which in effect renders it an ineffective instrument. In 1994 intensive discussions began to formulate a "compliance protocol," which would constitute an integral, binding part of the convention and allow enforcement of its clauses. In 2001 the talks were terminated at the insistence of the US and to the dismay of most of the European states. The Americans expressed a great deal of skepticism regarding the effectiveness and applicability of the compliance protocol, especially because of the characteristics of biological weapons and their related technologies, and anticipated biotechnological advances. Furthermore, since according to the Americans the principal threat stems from terror organizations, the compliance protocol represented a misplaced and futile effort.<sup>7</sup>

With its termination of the compliance protocol talks, however, the US launched processes involving national legislation, stringent export control regimes, and enforceable supplier regimes that it feels would be more effective and contribute more than the convention in preventing the

proliferation of non-conventional weapons to terrorist organizations. And indeed, immediately after September 11 and the subsequent anthrax affair, the US began to enact laws and regulations and initiated export control regimes and supplier regimes. This activity, along with related US pressure, led to similar actions on the part of other countries and organizations, including the UN, the EU, and the G8. While it is still too early to assess the results of the intensive counter-proliferation activity by the US and international organizations in the past three years, there is no doubt that awareness has greatly increased and the issue commands an important place on the international agenda. The expectation is that this awareness will gradually produce a cultural norm that will lead to reduced trade and proliferation of dual-use materials and equipment to state supporters of terror as well as terror organizations.

## Counter-Proliferation Policy and Legislation

### *The United States*

In 2002, as a direct result of the anthrax envelopes, Congress enacted the Public Health Security and Bioterrorism Preparedness and Response Act of 2002, whose purpose is "to improve the ability of the United States to prevent, prepare for, and respond to bioterrorism and other public health emergencies."<sup>8</sup> The law establishes mandatory measures to ensure that the US is fully prepared to deal with biological terror, and assigns the responsibility to the executive bodies – the Department of Health and Human

Services (DHHS), including the Centers for Disease Control and Prevention, and the Department of Agriculture (USDA) – for all matters related to biological agents posing a threat to humans and animals. This involves organizational and practical measures, the development of self-defense means, and sizable budgets. The law also requires very stringent bio-security measures to prevent and/or minimize the leakage of dangerous biological agents and toxins, as well as the transfer of technology and information from labs and research institutes, including academic institutions, to hostile elements.

The law lists biological agents, bacteria, viruses, and toxins that pose a clear danger if converted into biological weapons. All the institutions, organizations, and people in possession of these biological agents must adopt tight security measures, including the submission of reports and records. The law also stipulates documentation, control, physical supervision, protection, monitoring, control management, and secure transfer procedures of species stockpiles, as well as reporting all the employees authorized to handle these agents. The administration is entitled to reject an employee according to criteria specified in the law, particularly association/suspicion of association with terror organizations.

Although the symbol of individual liberty and freedom of expression, the US in this case chose an extreme, aggressive security approach, giving priority to security and control over scientific and academic freedom.

Hence the case of Professor Steven Kurtz of the University of Buffalo, who intended to use certain hazardous biological substances for an art project, and Robert Ferrell, chairman of the University of Pittsburgh's Human Genetics department, who provided him with the substances without obtaining the proper legal approvals. Both have been charged with legal offenses and face prison sentences of up to twenty years if found guilty.<sup>9</sup>

Through the Department of Commerce and other government departments, the US has undertaken intensive, widespread activity in the area of supplier regimes and export control regimes. As part of this endeavor, Congress has enacted laws and stringent regulations were designed to prevent the trade and export of WMD and their components, as well as dual-use materials and equipment.

On the international front, the US is a member of the Australia Group (AG), headed by Australia and comprising thirty-eight member states. Since its founding in 1984, the AG has earned a key role in global supplier regimes, regarding the import and export of chemical and biological substances. It initiated and regularly updates its regime according to global strategic and scientific-technological developments, and has of late devoted much attention to the impact of the non-conventional terror threat on the existing regime. In 2002, in order to reinforce and tighten the regime, as well as the chances of implementation and enforcement, the group published a document entitled "Guidelines for Transfers of Sensitive Chemi-

cal or Biological Items".<sup>10</sup> It also added new, previously excluded biological agents to the list of banned substances, and recently expanded the list of equipment requiring control (e.g., aerial sprayers).<sup>11</sup> The group's activities have most likely led to a reduction in the trade of dual-use substances and equipment, and, in turn, to a reduction in their proliferation to

Although the symbol of individual liberty and freedom of expression, the US chose security and control over scientific and academic freedom.

countries that support terror as well as to terror organizations.

As part of a comprehensive counter-proliferation effort, which consists of intelligence, diplomacy, law enforcement, and other means for preventing the transfer of WMD to dangerous elements, President Bush launched the Proliferation Security Initiative (PSI) in 2003.<sup>12</sup> This initiative is part of the national anti-WMD strategy announced by the president in December 2002. Designed to stop global shipments of WMD, their delivery systems, and related materials, it aims to produce a dynamic, creative, and proactive approach to the prevention of proliferation to or from nation

states and non-state actors of proliferation concern. The principles of the initiative were published by eleven countries in September 2003, and since then have been endorsed by others. Because success of the initiative greatly depends on international cooperation, the founding countries have encouraged other countries to adopt its principles. As an outgrowth of the PSI, the US enacted new federal laws that went into effect beginning July 1, 2004. The laws, which relate to some 3,000 ports and terminals, attempt to combat the transfer of WMD, including biological substances, and demand that each container and sailing vessel bear freight authorization by the country of origin.

### *The United Nations*

In April 2004, the UN Security Council published Resolution 1540, which addresses the non-proliferation of nuclear, chemical, and biological weapons and their delivery systems.<sup>13</sup> The resolution, recognizing the major threat to international security posed by the proliferation of non-conventional weapons and particularly the risk they entail if possessed by terrorists and non-state actors, lists certain mandatory actions to stem such proliferation. Particularly noteworthy is that Resolution 1540 represents the first UN Security Council comprehensive resolution that not only contains declarations, but also places operative demands on the member states to take clear, defined steps, including domestic legislation, to combat proliferation of non-conventional weapons.

### ***The G8***

At the 2004 G8 summit in Evian, France, the member countries formally recognized proliferation of WMD and delivery systems, along with international terrorism, as a genuine threat to world peace and security. Accordingly, a plan of action for the war on proliferation of WMD was launched in cooperation with other interested states. In line with this approach, the G8 countries announced their fervent support of UN Security Council Resolution 1540 and its demand that all countries institute effective export control regimes, enact effective counter-proliferation laws, enforce these laws, and take steps to prevent WMD from spreading and falling into the hands of terror organizations.<sup>14</sup>

### ***The European Union***

In June 2004 in Shannon, Ireland, the US and the EU declared that the proliferation of WMD constitutes a serious threat to world peace and security. Their declaration includes a list of matters that must be addressed in order to combat proliferation, including a call to all other countries to implement UN Resolution 1540. The joint US-EU resolution also urges other countries to adopt the principles of the G8 plan of action and sign the existing international treaties.<sup>15</sup>

### **Israel: What Is and What Should Be**

As a rule, Israel supports the US policy of fighting international terrorism, particularly non-conventional terror. Israel itself has a longstanding

tradition in the area of military and civilian self-defense against an attack involving the use of non-conventional weapons, and it cooperates with the US on related technological and operative matters.

Regarding proliferation prevention as part of a comprehensive policy of fighting non-conventional terror and as part of the US-led global policy,

Israel has not yet acted sufficiently aggressively to prevent the proliferation of non-conventional materials to hostile elements.

Israel has not done much except on the declarative level. Unlike the US, Israel has not enacted any primary legislation aimed directly at preventing or reducing the proliferation of non-conventional weapons and their components, such as dangerous biological agents. True, Israel has laws and regulations – some fairly old and others relatively new – that deal with environmental, occupational, and medical safety. These laws and regulations may indirectly make a very limited contribution to supervision and control of the transfer of hazardous materials and biological agents to hostile elements.

In terms of export control, how-

ever, Israel has recently undergone an important development in the publication of the Import and Export Order (Control of Chemical, Biological and Nuclear Exports 2004) signed by the Minister of Industry, Trade, and Labor.<sup>16</sup> The main objective of this order is to constitute “part of Israel’s efforts to assist in keeping world peace and stability, and in preventing the proliferation of non-conventional weapons and non-conventional terrorism” by means of “the prohibition of exports from Israel of goods, technology, and services that may be used in the development and production of chemical, biological, and nuclear weapons.” It should be noted that the lists of chemical and biological materials and equipment are based on the Australia Group’s lists, and thus Israel has in effect adopted the AG and US positions. Yet in order not to limit bio-medical and basic scientific research and international academic cooperation, the order exempts institutions from applying for a license for the transfer to certain specified countries of chemical material or a biological agent for diagnostic purposes, medical or veterinary treatment, or medical or veterinary research, as well as the technology related to that exported material or agent. The order includes a catch-all provision that prohibits the export of materials and equipment designated for WMD programs, and stipulates regulations for controlling dual-use items in the biological, chemical, and nuclear domains according to the AG and Nuclear Suppliers Group (NSG) lists. The foreign minister recently publicized a

letter that was sent to the Australian foreign minister and other international figures. The letter cites adoption of the order as part of Israel's policy of participating in the global effort to curb WMD proliferation, especially to terrorists and countries that support them. This policy, according to the letter, also supports the AG principles, supplier regimes, and derivative legislation and regulations.

Because, however, Israel has not yet acted sufficiently aggressively to prevent the proliferation of non-conventional materials, particularly the transfer of biological agents and related technologies, to hostile elements, it is essential that it act intensively in both the domestic and international spheres.

**At the Declarative Level.** In every international forum, Israel should declare that it has a vested interest in, and is committed to, being a part of the global effort to prevent the proliferation of WMD and its delivery systems, particularly to terror organizations and countries that support terror, and therefore, it supports the AG, and the PSI. Similarly, Israel should declare its support for the relevant UN resolutions and in particular Resolution 1540, both in principle and in its intention to adopt the operative measures, i.e. appropriate legislation, supplier regimes, supervision regimes, and the enforcement of these measures.

**At the Operative Level.** Israel must assess the need for primary legislation such as what is cited in UN Resolution 1540 that prohibits non-governmental entities from manufacturing,

purchasing, possessing, developing, transferring, transporting, and using nuclear, chemical, and biological weapons and their delivery systems, particularly for terror-related purposes.

- It must examine whether there is reason to enact a law similar to the US Bioterrorism Preparedness and Response Act, designed in part to prevent the spread of dangerous biological agents and sensitive technology to terror organizations. Israel has no legislation of this sort, and therefore must assess the value of such legislation and which ministries should bear responsibility for its implementation.

- The country must examine whether the existing laws, regulations, and orders dealing with public health, environmental safety, and work safety, which come under the responsibility of several ministries, should be updated from the point of view of bio-security so that they will also be applicable in preventing proliferation.

- New legislation or updated legislation will constitute a basis for determining internal arrangements, regulations, standards, and procedures at all the institutions and relevant industries in Israel that will have to comply with these laws and regulations.

- The Import and Export Order of 2004 is a step in the right direction and corresponds with international policy, including UN Security Council Resolution 1540. Now the authorities, headed by the Ministry of Industry, Trade, and Labor, must act intensively to implement and enforce the

order so that there will be effective control of exports without consequent economic damage. The authorities must monitor implementation of the order, draw conclusions a year or two later, and update and revise the procedures accordingly. It is especially important to examine whether the relatively detached approach to the matter of bio-medical research, particularly the exemption for the transfer of chemical material and biological agents for research purposes, is a reasonable leniency. The procedures will also have to be updated in accordance with global strategic and scientific-technological developments.

- Israel must join international initiatives in the area of supplier regimes. Since Israel has announced that it accepts the AG policy, it must therefore continue to conduct talks with the group, coordinate positions and policy, exchange intelligence and technological information on new materials, and contribute information that would update AG guidelines as needed. Similarly, Israel should announce its adoption of the PSI principles formulated in Paris in 2003, conduct talks with the countries that have endorsed the initiative, and plan for the supervision and control of the transfer of banned items through land routes but especially through sea and air routes.

- Exchanges of ideas, talks, and other communications channels between relevant academic and industrial entities and administration agencies/government ministries on specific fields in the life sciences – e.g., biotechnology and genetic engineer-



ing – must be initiated. Academic institutions and industries are the first to anticipate and discern new scientific developments with the potential to be exploited by terrorist elements and can issue the required warnings. At the same time, academic and industrial labs use biological agents that through improper management could be transferred to hostile parties. Therefore, the aim of talks is to adopt understandings, agreements, procedures, and regulations, and also create control mechanisms to minimize the spread of biological agents or hazardous materials and related know-how to terrorist elements.<sup>17</sup> Some of the possible mechanisms for reducing the risk of illicit transfers are:

- have science and industry institutions join the initiatives, agreements, and codes of conduct to act according to safety and security criteria

- improve means for safeguarding and securing stockpiles of dangerous species

- maintain recording, supervision, and control procedures at institutions

- control and supervise research of biological agents and other sensitive areas, using the type of supervision that exists at research institutes engaged in genetic research and similar sensitive fields

- encourage the incipient efforts in the chemical and pharmaceutical industries to create an ISO-type standards framework that will also include security aspects, extending beyond environmental and occupational aspects.

## Conclusion

Since September 11 and the anthrax affair there is increased awareness of the potential magnitude of the terrorist threat and its possible biological form. Rapid advances in life sciences and the anticipated developments in biotechnology, genetic engineering, and other advanced technologies not only have the potential to produce

**There are initial indications that the initiatives and regimes are effective in reducing the trade and transfer of non-conventional weapons and their components.**

new drugs for serious diseases, but also pose tremendous security risks for fear that terror organizations may exploit the technology to cause diseases, epidemics, and other biologically related damage.

The most efficient way of combating the nonconventional terror threat is to carry out simultaneous action on several levels: deterrence (though in the case of terror, effectiveness is questionable), prevention, and preparations for responding to the fallout of an attack should one occur. The US is spearheading the global fight against proliferation of non-conventional weapons in general and biological weapons and their components in

particular. Hence the adoption by the US and other countries of the laws, regimes, and initiatives designed to prevent the spread of hazardous materials to hostile elements. While it is still too early to assess the results of these activities, there are initial indications that the initiatives and regimes are effective in reducing the trade and transfer of non-conventional weapons and their components to terrorist elements. Nevertheless, there is no way of knowing at this point how much the absence of non-conventional terror of a serious magnitude is a direct function of the proliferation prevention regimes.

Israel shares a common interest with the US to combat the biological threat by means of proliferation prevention and the use of legislation and regulation, supplier regimes, and export control regimes. Therefore, the country should increase its efforts in this sphere in coordination with American and international policy, and give a serious push to adoption and enforcement of relevant initiatives. It should also act to increase awareness among the pharmaceutical and biotechnological industries and academia regarding the security risks posed by some research and development areas in the life sciences, and set up mechanisms for coordination and cooperation between these bodies and the appropriate government ministries.

## Notes

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# Israel's Defense Industry in the 21<sup>st</sup> Century: Challenges and Opportunities

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**T**he current financial troubles of Israel Military Industries (IMI) and the record arms sales to India turned the spotlight once again on Israel's biggest industrial sector, the defense industry. The past decade brought many changes to the domestic defense companies, including mergers and sweeping adjustments to work and management practices. Their improved output and state-of-the-art capabilities helped place Israel among the top five arms exporters. The Israeli government, preoccupied with other burning issues, has displayed a hands-off approach and steered away from attempts to intervene in the direction and structure of the industry, which includes the three state-owned companies of Israel Aircraft Industries (IAI), IMI, and Rafael. A seemingly benign posture, it fails to take note of far-reaching changes in industrial defense policies, both in Western Europe and the US. Furthermore, deep cuts in the defense budget for 2005

suggest that the industries will have to find alternative revenue streams, as new orders from the Israel Defense Forces (IDF) are likely to fall sharply in coming years.

This essay charts how the Israeli state-owned firms have managed in the past to bounce back after painful restructuring processes, but questions their ability to retain a commanding position in today's highly competitive export markets without clear governmental guidance regarding their intended structure and aims.

## The Quest for Self-Sufficiency in Arms Production

The growth of the Israeli defense industry was a combination of policy and circumstance. Acute threats by Arab states led to the psychological as well as material institutionalization of the "centrality of security" concept, an approach that was strengthened by arms embargoes and broken agreements among foreign suppliers. Hence, Israel's policymakers encouraged a rapid expansion of the state-owned arms industries and their involvement in production of state-of-the-art weapon systems.

Over the years Israel realized that

financial and technological constraints made self-sufficiency in arms supply impossible. This recognition led to a dual-policy approach towards defense procurement. While the government continued to pursue every opportunity to buy weapons abroad, it also invested heavily in establishing a sophisticated defense industry.<sup>1</sup> It was thought that the defense industry would have the ability to tailor weapons and develop new ones not available elsewhere by creating advanced, defense-oriented research and development facilities. Such an industry would also be a source of employment, urban development, and export revenue. Most important, by reducing the risk of future arms embargoes, Israel would be able to maintain better diplomatic and political latitude.<sup>2</sup>

Table 1 presents a select list of main military technologies developed in Israel. The criteria for developing and manufacturing weapons locally were driven by the following considerations:<sup>3</sup>

- Political: the refusal of foreign powers to sell critical weapon systems (or the breach of contractual commitments to supply battle systems).<sup>4</sup>

- Economic: the lower cost of

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domestic production compared to imports, and the ability to prolong the service life of combat systems through upgrades.

■ **Military:** the achievements of Israeli developers that helped the IDF acquire a decisive advantage on the battlefield, for example, in electronic warfare.

■ **Strategic:** the production of special weapon systems unavailable from other sources, needed to facilitate a regional deterrence posture. Independent research, development, and manufacturing helped Israel reduce its reliance on foreign supply sources.<sup>5</sup> A comprehensive knowledge base was set up in universities and government laboratories through global networking and applying practices such as reverse engineering, industrial espionage, and smuggling specialists and equipment in covert operations.<sup>6</sup>

The need for additional income and the rising costs of new developments enhanced arms export endeavors. Israel was quick to offer operational solutions to foreign customers, based in part on IDF combat experience. Over the past thirty-five years, defense export sales increased eighty times, from \$40-70 million in the 1970s to \$3-4 billion in the 2000s, amounting to approximately one fifth of Israel's total exports.<sup>7</sup>

A rapid rise of export revenues in the 1980s partially subsidized the R&D costs of new weapons and compensated for sharp cuts in the domestic R&D budget.<sup>8</sup> Revenues generated by arms sales to Iran (during the shah's reign), South Africa, China,

**Table 1: Israel's Core Military Technologies (selected list)**

Field	Subject/System
Navigation and ranging	Range finders
Energy and laser	Non-lethal weapons; laser designators; range finders
Aeronautics	Structure and aerodynamics
Battle Protection	Survival suits; reactive armors
Electronics	Radar; pulse output modules
Ergonomics	Cockpits
Communications	Encoding systems and techniques
Electro-optics	Image processing; display and surveillance systems
Control	Gimbals control
Micro-electronics	Sensors and signal processing; superconductivity
Computing	Software
Structure and materials	Low radar cross-section; low infrared signature materials
Platforms	UAV and aircraft; launchers; tanks
Electronic warfare	Passive and active electronic countermeasures, electronic counter-countermeasures
Propulsion	Engines for space, land, airborne, and naval uses
Simulation	Flight, missile, and naval simulators

Singapore, and Chile helped fund major weapon systems and maintain inflated employment levels within the industry.<sup>9</sup> Some export deals, for instance with South Africa and China, included technology transfers and joint development of weapons.<sup>10</sup> The profits from arms exports were large enough to stifle any question over the risks of keeping a defense industrial base, which was clearly too big for Israel's own needs. Indeed, the arms sales not only played a crucial role in offsetting Israel's trade imbalance, but also helped to save Jewish communi-

ties<sup>11</sup> and to maintain contacts with countries that refrained from full diplomatic relations.<sup>12</sup>

## Industrial Adjustments in the 1990s

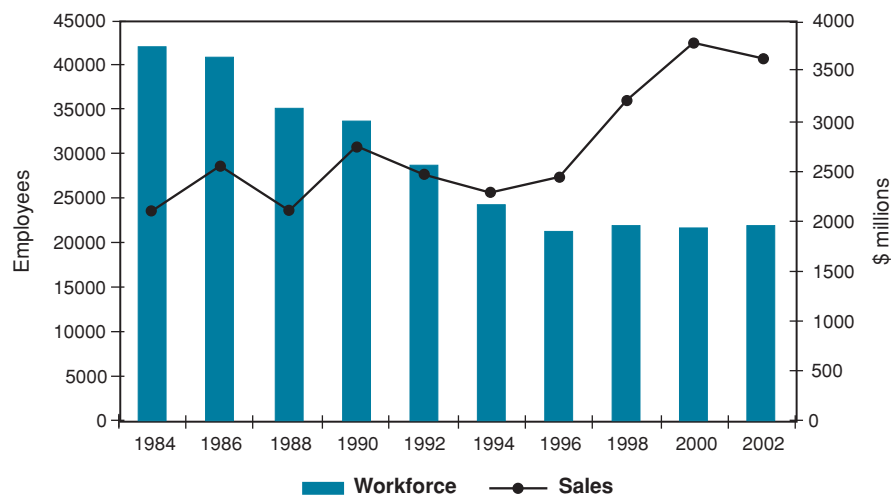
Major events in the second half of the 1980s, principally an economic crisis in Israel and the end of the Cold War, had a lasting impact on the defense industry. Local defense expenditure was reduced as the government tried to rein in hyperinflation through a series of deep cuts in domestic expenditure. Consequently, the IDF

bought far less from the local industry,<sup>13</sup> opting for American products paid through US military aid to Israel. Major contracts with foreign clients were completed while others did not arrive, thus leaving the defense industry to struggle with redundant capacity.

Indeed, extensive US military aid, which now stands at around \$2 billion a year, exposed deep anomalies in the relationship between the IDF, the Ministry of Defense (MoD), and the defense industry.<sup>14</sup> During the 1980s, the IDF started exercising a principle known to economists as “consumer sovereignty,” following a decision by the MoD in 1975 to give the IDF full control over the defense budget, including weapons development and acquisition. This meant that the IDF was able to determine not only its needs but also to prioritize its spending allocation. Consequently, the IDF’s preferences took precedence over the interests of the domestic industrial base.<sup>15</sup> The military has always favored off-the-shelf equipment and objected to vast investment in costly and risky programs funded through the defense budget.<sup>16</sup> Gradually, the IDF allocated less and less to R&D projects, and more to salaries and pension payments, in order to ensure its competitiveness as a prospective employer.<sup>17</sup>

The cancellation of the Lavi fighter aircraft project in 1987, under strong pressure of the Israel Air Force and the American administration, was a turning point in the relationship between the armed forces and the defense industries. The government no longer

**Figure 1: Improved Performance of Israeli State-Owned Defense Industries**



**Note:** figures include subsidiaries; exclude former employees on companies’ payroll.  
**Sources:** IAI, IMI, and Rafael corporate reports; State Comptroller, Ministry of Finance, and Government Companies Authority reports.

viewed the local defense industries as the preferred supplier to the IDF, and the US pledged to back Israel militarily and diplomatically during the peace negotiations in the Middle East.<sup>18</sup> Thus, the industries were merely required to guarantee the IDF’s qualitative edge through “power multiplier” systems, in other words, to supply weapons that would guarantee superiority in the battlefield that were not available from other sources.<sup>19</sup>

The conclusion of major contracts, most notably with South Africa, raised further complications. IAI, IMI, and Rafael were forced to undertake massive employee reductions. In a protracted and often confrontational development, staff size was cut from 43,700 in 1985 (at the peak of the expansion) to 22,000 in 2002<sup>20</sup> (figure 1). Research and production interests

shifted from major platforms to technologically advanced systems and components for the military and the civilian markets.<sup>21</sup> The contraction process, which started in 1992 and was to spread over a period of 20-25 years, was paid directly by the state’s treasury and not by the companies themselves, and it included severance pay and early retirement packages, state guarantees, and other aid allowances, at a total cost of \$5 billion. This expenditure was deemed necessary in order to ensure that Israel would have a viable defense industry “for the next hundred years.”<sup>22</sup>

Privately owned defense companies with competing expertise also undermined the position of state-owned companies, as they were gradually attracting a larger portion of MoD contracts. Their growing presence was increasingly felt following



the introduction of the Compulsory Tender Law that required the Ministry of Defense and all other branches of government to introduce a competitive bidding process for services and products. Privately owned companies stepped into the state-owned industry's traditional territory, such as upgrades and electronic warfare systems, and demonstrated that their leaner structure posed a real challenge to the state-owned sector.<sup>23</sup>

The privately owned defense industry, which accounts for a third of the defense industry base, started a process of mergers and acquisitions. Elbit Systems and El-Op merged in July 2000,<sup>24</sup> while Koor Industries consolidated its defense businesses, which included Elisra Electronic Systems, Tadiran Electronic Systems, Tadiran Spectralink, and BVR, under the umbrella of Elisra Group. In sharp contrast to this development, the government was reluctant, and in some instances unable, to further plans for far-reaching restructuring in the state-owned sector.<sup>25</sup> Potential clashes with workers' unions, lack of practical advice by the bureaucracy, and contradictory positions of senior officials deterred politicians from rocking the boat. They opted for the status quo and stable labor relations despite recommendations of senior civil servants to privatize the state-owned sector.<sup>26</sup> Thus, the government paid lip service to the notion of privatization,<sup>27</sup> without taking concrete steps.

Among the most salient obstacles was the refusal of the Ministry of Defense to relinquish its control over these industries until a law was in

place to safeguard the nation's vital interests, for example guarding against the involvement of foreign ownership, control, and influence of the defense sector.<sup>28</sup> Nevertheless, in 2002 the government completed the incorporation process of Rafael and permitted IAI to buy 30 percent of the shares of the Elisra Group. The Ministry of Finance and the Government Companies Authority presented a plan for partial privatization of IAI, which includes issuing up to 30 percent of the company's shares.<sup>29</sup> Political and financial factors, however, are stymieing the plan, as IAI's profitability in 2003 and 2004 tumbled sharply following a drop in civilian orders and the cuts in Israel's defense budgets, which affected all industries.<sup>30</sup>

Against this backdrop, major industries started selling lucrative business lines in an attempt to raise cash. IAI, for instance, sold Galaxy Aerospace, its business jet subsidiary. The cash-starved IMI started selling factories and has been implementing yet another consolidation and recovery plan over the past two years, due to severe cash flow and negative equity problems.<sup>31</sup> IMI was granted a loan from the government, which also decided to fully privatize IMI's subsidiary, Ashot Ashkelon. IMI's fate remains unclear and the Ministries of Defense and Finance examined the idea of a sale of the firm, as a whole or in parts. A possible merger with Rafael was also suggested.<sup>32</sup> However, no concrete steps have been taken so far in either direction.

## The 21<sup>st</sup> Century and Beyond

The post-9/11 challenges present a different reality for defense industries worldwide. The aftermath of the terrorist attacks caused a transformation of military thinking on both sides of the Atlantic. There is a greater emphasis on precision weapons and mobility, a crucial combination for an efficient fight against enemies who may be otherwise difficult to pin down. There is also a focused interest on homeland defense and better awareness that winning a war now depends as much on superior information as on dominance of the skies or control of posts on the ground.<sup>33</sup> Consequently, the US increased its defense spending by an annual 5-10 percent, and it is scheduled to reach \$413 billion by 2005. The European Union adopted a Joint Action for a European Defense Agency, aimed at improving procurement mechanisms and streamlining defense capabilities with a moderate rise in budget totaling nearly \$193 billion across the continent.

The interest in sophisticated weapons came after years of receding demand, during which many US firms underwent a swift wave of mergers and acquisitions. The defense industry in America is now comprised of only five major prime contractors. This is not the case of the European firms, which are scattered in fragmented markets and largely excluded from the growing American demand.<sup>34</sup> Rather than following the US model of consolidation, the Europeans have preferred to create joint ven-

tures, thus exercising only a limited industrial restructuring.

The future of the defense industry in Europe has become a subject of heated debate. France and Germany believe that if left unaided, the European industry is doomed in the face of the larger, better financed US firms. The two governments decided to push for the creation of "super conglomerates" in key markets, following the German government's success in engineering a merger between its two biggest shipyards. The UK, on the other hand, advocates a different, free-market oriented perspective, as was manifested in its "Defence Industrial Policy" document of 2002.<sup>35</sup> It is far less inclined to be involved in interventionist actions.<sup>36</sup>

For their part, Israeli policymakers have done virtually nothing since the 1998 publication of the recommendations of a special committee headed by a senior Ministry of Defense official, Moshe Peled, which supported structural reforms and privatization.<sup>37</sup> However, in the current climate and circumstances, the government is unwilling or unable to further any of them, most notably in the case of IAI, which is now "at the bottom of the Sharon government priorities."<sup>38</sup> As a result, Israeli firms, both private and state-owned, have taken matters into their own hands. By buying local companies in key target markets and setting joint ventures, they have become more attractive to the Pentagon and major defense establishments around the world.<sup>39</sup> The purchase of controlling stakes in US firms by IAI, Elbit, and El-Op and the formation of new

subsidiaries is a tried and true strategy that was implemented to varying degrees of success in the European market as well.

Thus, in January 2000 Elbit announced the establishment of a wholly owned subsidiary in Austria,<sup>40</sup> and in July 2003 it purchased a Belgian firm for electro-optical products and space applications.<sup>41</sup> A year later it formed a successful joint venture with the French giant Thales, which was selected in July 2004 by the British Defence Ministry as the preferred bidder for a major UAV program.<sup>42</sup> In November 2003, Tadiran Communications announced that it had acquired 75 percent of the German firm Racoms, which produces military radio communications products for the German army. Of the state-owned companies, Rafael increased its European presence significantly. In February 2004 it formed a joint venture with the European giant EADS for the marketing of anti-missile protection suits.<sup>43</sup> Four months later, Rafael announced that it signed an agreement to establish a new German-based company, EuroSpike GmbH, with two of Germany's biggest defense firms, Rheinmetall Defence Electronics GmbH (RDE) and Diehl Munitionssysteme GmbH (DME). The new company will serve as the prime contractor for a family of guided missiles for European customers.<sup>44</sup> On the same day, IAI announced that it signed a cooperation agreement with RDE to offer jointly an upgrade kit for the main German battle tank, Leopard.<sup>45</sup> It also formed joint ventures for marketing and development

of UAVs and training aircraft with American firms.<sup>46</sup>

Most of these cooperative ventures and takeovers concern relatively small companies engaged in similar activities whose main clients are European defense ministries. However, Israeli firms expect these operations to lead to a significant increase in the sale of military technologies to Europeans armies and to NATO in the next few years. For example, Elbit Systems President and CEO Joseph Ackerman predicted that "in the future, we expect our European activities to almost double and amount to 28 percent of our total sales, up from the current 15 percent."<sup>47</sup>

Until a few years ago, the links between Israeli industries and European industries were limited to ad hoc cooperation. The takeover of European firms and the creation of strategic joint ventures reflect a bold step in a direction advocated by the Israeli Ministry of Defense long ago, namely to help Europe bridge its technological gap with the US by collaborating with Israel's leading defense firms, as was demonstrated by the decision of European aerospace giant EADS and the French firms Dassault Aviation and Sagem to cooperate with IAI in the development and production of UAV technology.<sup>48</sup> This approach benefits Israel, which seeks a deeper and positive presence in Europe, as well as the Europeans, who seek ways to further their technological capabilities despite budget limitations.<sup>49</sup>

Strategic partnerships between Israeli firms and similar industries in Europe draw Israeli firms closer to

their target clients. In addition to marketing advantages, Israeli firms are likely to promote mutual research and tailor-made solutions with EU and NATO member states, which were made possible through agreements for cooperation and joint research between Israel and the EU<sup>50</sup> and bilateral arrangements with key countries in Europe, including Germany, the UK, France, and Italy. By situating themselves at the heart of Europe, Israeli firms are better positioned to forge industrial partnerships with new EU members from Eastern Europe, most notably Poland and the Czech Republic, whose defense industrial base is lagging behind that of mainstream Europe.<sup>51</sup> Rafael and Elbit have already realized the potential in Eastern Europe, forging major deals in Poland and Romania, respectively.

In terms of future budgetary trends, the EU countries are unlikely to match the US defense budget any time soon and will rely on NATO's operational capabilities. However, Israel anticipates a significant worldwide growth in budgets for homeland security, counter-terrorism, and asymmetric warfare, especially in the areas of installations protection, border systems, bio-terror prevention, data security, and access control (through biometric screening).<sup>52</sup> Israel possesses cutting edge, battle proven technologies in these areas and offers shorter and cheaper R&D cycles. It is a world leader in development of sophisticated fences, border control, and monitoring systems, which can answer new security concerns facing the EU following its enlargement. EU's

long borders are viewed by many as an easy target for terrorists, smugglers, and illegal immigrants, a fear that prompted the EU to allocate more than €2 billion for spending on new border protection systems by 2006.<sup>53</sup> Spain and Italy have already acquired border protection systems from Israel and others are likely to follow suit.

Europe is one of two key target areas for Israeli firms. The other growing market is Asia, where India is fast becoming a major customer for Israeli defense firms, with average sales approaching \$1 billion per year. Some companies considered expanding through local partners, like the small Israeli firm ITL (International technologies Lasers, a subsidiary of Soltam Systems), which supplies laser pointers, optical target sights, and night vision systems to the IDF and armies in Europe and Southeast Asia.<sup>54</sup> At the same time, Rafael has been negotiating an agreement to manufacture missiles and communication systems in Bangalore, India,<sup>55</sup> which resembles the level of cooperation offered earlier by Israel.

The underlying goal behind these efforts is to find a steady source of income other than the IDF by securing a foothold in the growing market of European and Indian defense. The IDF has become a secondary customer for almost all companies, whose exports activities now account for almost 80 percent of revenues. This is an astonishing achievement, bearing in mind that the reverse is true in relation to US and European companies, where 70-80 percent of their income derives from domestic customers.<sup>56</sup>

With the MoD encouragement of Israeli firms going abroad and expanding their activities with local partners, this outward trend is likely to continue, despite the cyclical nature of the exports market and certain commercial risks, and despite the danger in opening up to foreign industries that might become competitors, as was the case with South African firms after the collapse of the apartheid regime.<sup>57</sup> In practical terms, these partnerships and joint ventures have replaced the traditional relationship with the IDF. While in the past the "battle proven" label was viewed as an essential component in the export endeavors, the present trend is to work with foreign partners, whose local presence and influence make them an ideal sales promoter vis-à-vis the client.

These partnerships can also serve as a safety net against unfavorable political changes. Some indications suggest that in certain cases, for example changes in government, Israel's export efforts are frequently hampered. A major Israeli defense firm calculated that its sales to Spain plummeted by more than 90 percent over the past four years and that this trend is likely to continue, especially since the election of a socialist pro-Palestinian government. It remains to be seen whether Israel will be able to overcome a potential change of heart in Turkey and India, following recent internal developments. The dependence on a relatively small number of major clients, like India and Turkey, which is similar in many respects to the situation in the 1980s, makes the

industries vulnerable to sudden changes in the political climate. The industries faced financial difficulties when their contracts with Iran and later on with South Africa finished, and similar scenarios are likely here.

## Conclusions

The post 9/11 security dilemmas changed the nature of military operations, and with them, the required equipment and technology. It is widely accepted that borderless enemies can no longer be defeated with manpower-intensive, platform-heavy, and predictable doctrine. Gone are the days of trench warfare and carpet-bombing targets. Instead, there is a clear need for sophisticated, rapid, and precise military solutions. This was demonstrated in the US-led invasion in Iraq, which provided a venue for the deployment of cutting-edge military technologies such as unmanned aerial vehicles, precision guidance munitions, and satellites. Israel was not involved in the war with Iraq, but the type of products and technologies put to use by the US and its allies are aligned with leading areas of business that Israel started to pursue several years ago, including the ability to conduct day and night warfare, real-time intelligence, command and control systems, precision guidance munitions, and UAVs.

Indeed, the past four years suggest that the consolidation and recovery efforts of the 1990s have yielded significant achievements. The defense industrial base demonstrated an im-

pressive ability to change and adapt. Its response ranged from the closure of money-losing units and massive cuts in benefits and salaries to acquiring or establishing companies in the US, Europe, and Asia, while keeping abreast with the latest technology.

Israel's position among the top five arms exporters suggests that its export-oriented strategy works. It rep-

**The fact that a certain sector seems stable does not warrant a hands-off approach; rather, the post 9/11 and post-Saddam realities demand a complete overhaul of defense industrial policy.**

resents the across the board transformation of the defense industries from sluggish and inward looking to highly competitive and farsighted. However, this rosy picture might be short lived. For a start, the three major state-owned industries remain just that – state-owned. Despite their latest managerial practices and rapid response to changing business circumstance, they lack true flexibility and their drive for high profit margins is limited. The reliance on a small number of major clients and the long client acquisition period require sufficient flexibility to downsize when major contracts end. Without such ability, which is usually achieved once

the ownership is transferred to private or public hands, the industries will require additional financial aid from the government due to excess workforce.

But privatizing the state-owned sector is not enough. The Israeli defense industrial base will have to undergo further consolidations and mergers, along the lines of the US market, preferably by creating no more than three major groups. This will ensure important power and endurance and the advantage of economy of scale, as the US firms are developing competing capabilities to those of Israel's, seizing on the availability of an increased defense budget that also places significant hurdles on foreign companies. Indeed, Israeli firms will find it increasingly difficult to penetrate the European and US markets on their own, for political and security reasons

While the IDF continues to shy away from buying Israeli-made products for lack of resources, an aggressive pursuit after deeper and meaningful partnerships and cooperation abroad looks inevitable. Such arrangements, including the formation of new companies and overseas subsidiaries, will secure access to bidding invitations and eventually to vital revenue streams, which in turn will be used for developing future generations of weapons. Some Israeli firms have widened their markets by investing into the industries of other countries, a strategy that will enable them, in time, to present themselves as multi-



national companies with more than one national identity. BAE-Systems, Thales, EADS, and Elbit Systems have already pursued this route. However, this is not a risk-free choice. Increased involvement in foreign markets, even in a limited manner, may expose the Israeli government to direct or indirect pressure if it takes a controversial political move, especially if it continues to be the owner of the biggest defense firms in Israel.

Under such circumstances, will the government reduce its controlling stake in the domestic defense industry? Is it expected that the state will adopt a preemptive, wide range response to the global developments in this sector? Probably not. Judging by past experience, the government is not likely to intervene, let alone take a new initiative unless a major financial crisis looms once again. This apparent inaction could not be more dangerous. The fact that a certain sector seems stable – IMI's problems notwithstanding – does not warrant a hands-off approach; on the contrary, the post 9/11 and post-Saddam realities present major dilemmas that demand a complete overhaul of defense industrial policy.

At the moment, the Israeli government is following the unwise philosophy of "if it ain't broke, don't fix it." It should, however, follow the example of the UK government and abandon the model of defense industries as an element of national sovereignty, owned by the state and closely monitored by its agencies. Thus, it should seek a backseat role as a regulator rather than a proprietor and improve

the climate for further industrial restructuring, including privatization of the entire state-owned industry, apart from strategic, non-commercial segments. The government should do so by easing existing restrictions, for example the de facto ban on foreign ownership. Reversal of this policy will provide Israel with certain leverage over US firms, should they buy stakes in Israeli ones, and close working relations with the Israeli defense establishment will be absolutely critical in ensuring the Israeli firms' future growth in value and revenues. Contrary to the widely held view (and not only in Israel), the most opportune moment to take stock and change the course of the industry is when there are no visible signs of distress and while backlog orders are in abundance. In other words, right now.

## Notes

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2. Interview by the author with former prime minister Shimon Peres, December 2, 1997; Zeev Bonen, "The Israeli Defense Industry – Past and Future," lecture transcript (Technion, Yad Neeman, February 16, 1994), p. 35.
3. Israel Tal, *National Security – The Few against the Many* (Tel Aviv: Dvir, 1996), p. 72 [Hebrew]. Maj. Gen. (res.) Israel Tal, formerly deputy chief of staff, served as a senior assistant to the defense minister (1975-2000). See also Efraim Inbar, *Rabin and Israel's National Security* (Baltimore: Johns Hopkins University Press, 1999), p. 79.
4. Two of the most notable cases were the canceled sale of British Chieftain tanks in 1969, and the refusal of France to supply high-speed torpedo boats mounted with sea-to-sea missiles. Israel later smuggled the boats from the Cherbourg shipyard on Christmas 1969.
5. Interviews by the author with Israel Tal, January 14, 1998, and Michael Shor (Director-General of Israel Military Industries, 1972-90), June 30, 1998.
6. See report by the Defense Investigations Service (DIS), the field security branch of the American Department of Defense, quoted in *Haaretz*, January 31, 1996. The Kfir fighter plane, for example, was based on plans of the French Mirage V acquired clandestinely through a Swiss source in the 1960s. The Bureau of Scientific Relations (Lekem) in the Ministry of Defense was responsible for collecting scientific and technical intelligence abroad from open and covert sources. Lekem was disbanded in 1986 after it was identified as the agency responsible for spying on the US by recruiting Jonathan Pollard, an American naval intelligence employee. See "Israel – A Country Study," Federal Research Division, Library of Congress, December 1988; internet edition, <http://lcweb2.loc.gov/frd/cs/iltoc.html>, May 9, 1997 and March 2, 1998; and Stuart Reiser, *The Israeli Arms Industry* (New York: Holmes and Meyer, 1989), p. 104.
7. *Defense News* has ranked Israel as no. 3 in the world's top defense exporters, after the US and Russia. See Associated Press, November 19, 2003; on Amir Hayek, Director of Israel Export Institute, assessing Israel's industrial development, see <http://lib.cet.ac.il/pages/printitem.asp?item=2308>.
8. See interviews by the author with David Ivry, October 7, 1997 and June 28, 1998. Major General (res.) Ivry was Air Force Commander, deputy Chief of Staff, Chairman of IAI, and Direc-



- tor General of the Ministry of Defense (MoD) (1987-96). He also headed the National Security Council and served as Israel's ambassador in Washington.
9. *Haaretz*: July 17, 1994; February 5, 1999; October 19, 2000; and July 16, 2004; see also interviews by the author with former prime minister Yitzhak Shamir, June 30, 1998, and with David Ivry, October 7, 1997 and June 28, 1998.
  10. China was co-developing its future combat fighter based on the Lavi. See *Defense News*, September 2, 1996, p. 6; During the apartheid regime, South Africa was a major client. It bought surplus Kfir aircraft that were phased out of the Israel Air Force service, and air-to-air missiles technology that was later used by South African firms to develop their own versions, which ultimately competed with Israeli designs. Some of the projects that were co-developed with other countries resulted in heavy losses; for example the development of early warning aircraft cost IAI a loss of \$120 million. See *Haaretz*, April 1, 1997 and April 25, 2000.
  11. Aharon Klieman, *Israel's Global Reach: Arms Sales as Diplomacy* (Washington: Pergamon-Brassey's, 1985), p. 35; Israel bribed Sudan and Ethiopian leaders with arms to enable rescue operations of Ethiopian Jews in the 1990s.
  12. India and China established full diplomatic relations only in 1992, after decades of secret relations. See Moshe Yegar, "Basic Factors in Asia-Israel Relations," in Moshe Yegar, Yosef Govrin, and Arye Oded (eds.), *Ministry of Foreign Affairs – The First Fifty Years* (Jerusalem: Keter Press, 2002), pp. 534-35 [Hebrew]. Countries like Indonesia, which still have no formal relations with Israel, were supplied with military systems to help maintain a level of dialogue. In addition, IAI opened a representative office in Jakarta, Indonesia. See [www.menareport.com](http://www.menareport.com), November 19, 2003, citing the Israeli daily *Yediot Ahronot*.
  13. IMI's sales to the MoD fell by 45 percent from an average of \$200 million a year between 1982 and 1984, to \$109 million a year between 1985 and 1988. See *State Comptroller Special Report*, June 1994, p. 17. During the same period, IAI sales to the MoD dropped by 22 percent from \$641 million a year to \$500 million. See *State Comptroller Report* no. 45, p. 868.
  14. The US assistance supports the Israeli defense industry in several ways: it allows Israel to convert about 25 percent of the aid – around \$475 million – to Israeli currency for local uses. Since the end of the 1980s the US also offers offset programs as part of arms sales packages sold to Israel.
  15. Interview with Prof. Pinhas Zussman, July 6, 1998. Prof. Zussman, an economist, served as the MoD director-general between 1975 and 1979.
  16. Moshe Arens, "Arrow, Ofek, Lavi," *Haaretz*, August 5, 2004.
  17. The military R&D budget, which is part of the defense budget, was cut by 43 percent between 1986 and 1994. See *State Comptroller Report* no. 44, p. 1028. At the same time, the proportions of salary and pension payments grew exponentially. More than 2.3 billion shekels were allocated to the IDF's pension payments in 1998, compared to 0.9 billion shekels in 1986 (in 2000 prices) – an increase of 255 percent. During the same period, the portion allocated for salary in the defense budget grew from 35 percent of the defense budget to 45 percent, while the portion for services and acquisition fell from 50 percent to 40 percent between 1987 and 1997. See: Ministry of Finance, Budget 2000 and Budget 1998 proposals.
  18. See testimony of the Director of the Defense Security Assistance Agency before the House of Representatives Appropriations Subcommittee on Foreign Operations: "Defense Department Testimony on US Aid to the Middle East," United States Information Service, May 6, 1994, p. 1.
  19. *State Comptroller Report* no. 45, p. 910; Lifshitz, *Defense Economics*, p. 362.
  20. IAI workforce dropped from 22,000 in 1985 to 13,000 in 2001; IMI cut its labor force from 1460 to 4500, and Rafael reduced its workforce from 7000 to 4800. See Arens et al, *The Israeli Military Industries*, BESA Center for Strategic Studies at Bar-Ilan University, Colloquia on Strategy and Diplomacy, no. 9, August 1995, p. 25 [Hebrew].
  21. See interviews by the author with Imri Tov, MoD's economic advisor (1988-2000), October 8, 1997; and with Haim Adar, MoD's procurement director, January 18, 1998 and June 25, 1998. IAI is heavily involved in research and production for the civilian market. IAI reported that 39 percent of its revenues in 1999 were from the civilian sector while Rafael's and IMI's had only 2 percent and 5 percent, respectively. See *Haaretz*, April 6, 2000, and *Defense News*, August 9, 1999.
  22. Interview by the author with Yuval Rachlevsky, director of wages at the Ministry of Finance, March 16, 2002.
  23. Interview by the author with Colonel (res.) Aviem Sela, former head of operations, Israel Air Force, July 5, 1998.
  24. The merged company, which became the second largest defense group in Israel, employs 4000 workers with an annual turnover of \$750 million. *Haaretz*, October 3, 2000.
  25. Doron Cohen, director of the Government Companies Authority, resigned in February 2000, protesting against the government's indifference towards the privatization plans in the state-controlled sector. *Haaretz*, February 3, 2000.
  26. A proposal for an official policy in the defense industry sector, a statement published by the directors-general of the Ministry of Defense and Ministry of Finance, May 9, 1993.

27. Ministry of Finance, *Budget Proposal for 2000*, internet edition; interview with David Ivry (then MoD director-general and signatory to the document), October 7, 1997.
28. See protocols of the joint session of Treasury and Legislative Affairs committees, *Knesset*, May 15, 2003 and May 22, 2003. The absence of such legislation prompted the Ministry of Defense to veto the sale of IMI's heavy ammunition division to the American firm Lockheed-Martin in 1996. See interview by the author with Zvia Gross, legal advisor to the Ministry of Defense, March 15, 1998; see also *Haaretz*, September 23, 1999 and February 2, 2001.
29. In accordance with the government decision of April 2, 2003, see Ministry of Finance, *Main Points of Budget 2004* (Jerusalem: Ministry of Finance, 2003), p. 74; *Haaretz*, May 27, 2003.
30. *Haaretz*, February, 2004, and Ministry of Finance, *Annual Budget Report for 2004*. See: <http://www.mof.gov.il/budget2004/>.
31. *Haaretz*, January 5, 2004.
32. *Government Authority Report 2003* (Jerusalem: Government Companies Authority, March 2004), p. 11; *Maariv*, September 6, 2004.
33. *The Economist*, July 20, 2002.
34. The US DoD applies protectionist policies and practices, which caused a rift with the UK Ministry of Defence; see *Financial Times*, July 30, 2004. Foreign firms that wish to work in the US market find that their access is restricted and subject to complex controls. Even technology created in other countries and then exported to the US becomes subject to American export controls when incorporated within a US product. A recent official UK study noted that "obstacles to entry into the American market are still significant." See: [http://www.mod.uk/issues/industrial\\_policy.htm](http://www.mod.uk/issues/industrial_policy.htm).
35. Ibid.
36. *Aviation Week*, July 19, 2004, p. 100.
37. See interviews with Moshe Peled, in the following BBC News internet links: [http://news.bbc.co.uk/1/low/events/israel\\_at\\_50/israel\\_today/79621.stm](http://news.bbc.co.uk/1/low/events/israel_at_50/israel_today/79621.stm); [http://news.bbc.co.uk/1/low/special\\_report/1998/israel\\_defence/53505.stm](http://news.bbc.co.uk/1/low/special_report/1998/israel_defence/53505.stm).
38. *Haaretz*, February 3, 2004.
39. *Haaretz*, May 2, 2004.
40. Elbit's press release, January 18, 2000, <http://www.elbit.co.il/news/arch/jan2000a.html>.
41. Elbit's press release, July 1, 2003, <http://www.elbit.co.il/news/arch/july2003a.html>.
42. "Thales UK selected for the MoD's Watchkeeper program," Thales North America press release, July 20, 2004, see: <http://www.northamerica.thalesgroup.com/press/latest/790>.
43. Rafael's communiqué, February 2004: <http://www.rafael.co.il/web/rafnew/news/news-010304.htm>.
44. Rheinmetall Defence Technologies press release, June 16, 2004, <http://www.rheinmetall-detec.de/index.php?lang=3&fid=2488>.
45. Rheinmetall Defence Technologies press release, June 16, 2004, <http://www.rheinmetall-detec.de/index.php?lang=3&fid=2487>.
46. *Haaretz*, July 20, 2004 and October 14, 2004.
47. *Aviation Week*, Farnborough Show News, July 2004.
48. Agence France Presse (AFP) report, cited by *Defense News*, August 18, 2004, see <http://www.defensenews.com/story.php?F=3130237&C=europe> and *Globes*, June 17, 2004, <http://www.globes.co.il/serveen/globes/docview.asp?did=805989&fid=942>.
49. *Haaretz*, June 9, 2003.
50. Various R&D agreements between Israel and the EU, including the new navigation Galileo project and the 6<sup>th</sup> R&D framework, allow Israeli firms access to state-of-the-art projects with major European firms.
51. For a detailed discussion see Uzi Eilam, "Europe's Eastward Expansion: The Challenge for Israel," *Strategic Assessment* 6, no. 4 (2004): 37-44.
52. *Israel Venture Capital Journal* 3, no. 2 (2003): 8-9.
53. *Haaretz*, June 6, 2003.
54. *News First Class* website, 29 December 2003, citing the Indian newspaper *The Economic Times*. See online report: <http://www.nfc.co.il/newsprint/version.asp?docId=37106&subjectID=1>.
55. *News First Class* website, 28 January 2004, citing the Indian newspaper *Sify*. See: <http://www.nfc.co.il/newsprint/version.asp?docId=39122&subjectID=1>.
56. *Maariv*, February 24, 2004.
57. An interview with a senior MoD official, July 2004.

## Strategic ASSESSMENT

*Strategic Assessment* is a quarterly published by the Jaffee Center for Strategic Studies at Tel Aviv University, Ramat Aviv, Tel Aviv 69978 Israel Tel: +972-3-640-9926 Fax: +972-3-642-2404

*Strategic Assessment* is published in English and Hebrew.  
The full text of *Strategic Assessment* is available on the  
Center's website: <http://www.tau.ac.il/jcss/>