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Defending the Rear: When is Enough, Enough?

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Background

The 1991 Gulf War changed Israel's conception of the threat to its civilians from that of conventional to nonconventional weapons. No longer was the threat of a chemical or biological weapons attack dismissed as a remote possibility. Air raid shelters were no longer a priority. Instead, Israel, in accordance with its new doctrine, distributed personal protection kits against biological-chemical agents and ordered citizens to construct shelters in their apartments. Civil defense against non-conventional weapons became the focus of major government funding.

The need for civilian protection against an enemy missile attack is not in dispute. A May 1998 report by the State Comptroller's office says 30 percent of the 1.5 million apartments in Israel have no protection against a missile attack. The percentage is even greater in older neighborhoods. In Tel Aviv, for example, about 50 percent of the apartments are regarded as unprotected according to new government standards.

The question is how much money is needed for civilian protection. Despite government decisions, ministries still disagree over funding for civil defense programs. On July 7, 1996, the Finance Ministry obtained Cabinet approval to cancel a program to replace personal protection kits. The ministry cited a study by the Center for Military Studies at the Rafael Israel Weapon Development Authority that reported the cost of Israeli civil defense programs as being higher than that in the rest of the world. The study said Israel is, in effect, spending $50 million for each casualty prevented in a nonconventional weapons attack.

After an appeal by then-Defense Minister Yitzhak Mordechai, the Cabinet committee on defense decided to resume government funding of the protection kits through 1997, a program that two years later remains active. In 1998, during the U.S.-Iraqi crisis in the Persian Gulf – when Israeli defense officials asserted that civil defense remained insufficient – the

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government rushed to allocate additional funding to replace the protection kits in order to assuage an alarmed public. This decision stemmed mainly from political considerations rather than from a genuine need.

The dispute between the Defense Ministry and the Finance Ministry boils down to the following question: How much protection does Israel's civil defense require and should this be uniform throughout the country? This article will present the main elements of the threat to the civilian population, the principles of civil defense, and whether more money should be spent on the passive-defense component of Israel's defense system.

Threats to Israel's population

Israel's civil defense policy is based on two components. The first is to deter or prevent an enemy attack by surface-to-surface missiles. The second is to minimize the damage of such an attack should deterrence and prevention fail. Although the two are related, this article will focus on the components of passive protection. The other components will be mentioned only when they refer to the subject of passive defense funding.

• The Threat from Conventional Weapons

This threat is primarily from surface-to-surface missiles (SSM) with warheads of up to one ton. The most effective defense is any form of shelter to protect against the missile's shrapnel and blast. The shelter can range from a ground-floor stairwell, a protective wall, a room that is not adjacent to the outside wall of a building, a specially-constructed security room to a steel-reinforced concrete shelter. The rate in which casualties are reduced with each additional protective layer. Since the Gulf War, the government has required all new apartments to contain a so-called security room, reinforced with thick concrete walls.

Estimated casualties from a conventional missile attack remain low. A key reason is that the level of urban density and the accuracy of ballistic missiles have not significantly increased over the last eight years. The security rooms being built in apartments are not much more secure than other areas away from the building's perimeter. Even the use of larger warheads than those fired during the Gulf War [one ton today as opposed to a half ton in 1991] will not result in much more damage than that experienced eight years ago. This is

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because the effect of the warhead is not directly proportional to its weight. The ratio is much smaller.

This is not to say that the damage from one missile today might not be significantly greater than that seen during the Gulf War. Still, the likelihood that a missile attack against Israel would cause significantly greater casualties than in 1991 is extremely unlikely.

• **The Threat from Chemical Weapons**
A number of Middle East states such as Egypt, Iraq, Iran, Libya and Syria have stockpiles of chemical weapons that can be delivered by airplanes or surface-to-surface missiles. In response, Israel has distributed masks, protection kits and ordered the construction of sealed rooms. These rooms can protect against such chemicals as Sarin and VX, the latter, which penetrates the skin. Protection kits also contain an antidote to chemical agents. In addition, medical teams would be rushed to treat the wounded. These measures significantly reduce the number of casualties from a chemical weapons attack and, according to reports published in early 1998, could save anywhere from between several hundred to several thousand lives.

• **The Threat from Biological Weapons**
The biological agent that most threatens Israel is anthrax. As in the case of chemical weapons, protective measures include the ABC [atomic, biological, chemical] mask and the sealed room. The number of casualties from biological weapons attack depends on the failure rate of protection kits as well as the treatment provided to residents of the affected area. If antibiotics are distributed in time, the number of casualties should be relatively small. A key difficulty for civil defense authorities will be in identifying those exposed to the virus and quickly administering antidotes.

• **The Threat from Atomic Weapons**
Currently, Israel does not face an enemy with nuclear weapons. Regardless, there is no effective protection from a nuclear attack and dealing with the nuclear threat mainly comprises deterrence, an issue beyond the scope of this article.

How much is enough?

During the 1991 Gulf War, Iraq fired 42 missiles at Israeli cities, setting a precedent for a future attack. Still, Israel's deterrent capabilities make it extremely unlikely that an enemy would use nonconventional weapons against the Israeli population. The question is how much should be spent on the chance that this assumption is proven wrong?

Some planners maintain that civil defense has no price. But even such an approach cannot ignore cost. The current budget of NIS 150-200 million program for the maintenance and distribution of protection kits means spending NIS 25-30 ($7) per capita. For the taxpayer, the price might seem reasonable. But for policy planners, who must also fund major weapons systems, the cost is simply too high. The government must launch a policy that does not aim to provide Israelis with total protection but rather limit casualties to a level tolerable for a country at war. This would allow the leadership to wage war without diverting resources from the battlefield to attack missile launchers that threaten the home front.

The deployment of the home front must take into account the prospect of a total war (including an attack on cities) that stems from escalating regional tension. Deployment plans should not be based on either of the following scenarios: One, the 1991 Iraqi missile attack on Israel, which was limited to its cities; the second is a surprise attack, in which preparations by the home front would be unfeasible.

Therefore, the economy must balance the funding required to protect the population against the resources needed for national growth, education, health, prevention of traffic accidents, etc. The extent of allocations for civil defense must also be weighed against other components of national missile defense, such as deterrence, early warning and the interception of enemy missiles.

Protection against biological and chemical threats should constitute the main investment in national civil defense. An opposing argument is that such a policy could damage Israel's deterrent posture and would signal to the enemy that it might not be subjected to immediate retaliation. Still, efficient protection constitutes a significant element in strengthening deterrence. The enemy might fear its attack would fall short of its goals and then it would be exposed to retaliation. Thus, the benefits of a nonconventional weapons attack would be sharply reduced.

Still, the relative ease in which a population can be protected against chemical and biological weapons should

not come at the expense of deterrence. Deterrence must be the central element in defense, supported by protective measures in case of enemy attack. This concept is particularly important given what many regard as the panic demonstrated by Israelis and their leadership during the period of tension between the United States and Iraq in 1998, when many feared Baghdad would again fire missiles at the Jewish state.

Therefore, Israel's deterrence against the nonconventional threat must be reinforced primarily through carefully-phrased messages during periods of tension. The Israeli leadership must ease public concern over a biological and chemical weapons attack by issuing clear messages. Statements such as "There is no threat, but buy plastic sheeting to seal the security room in your apartment" merely confuses and frightens the public.

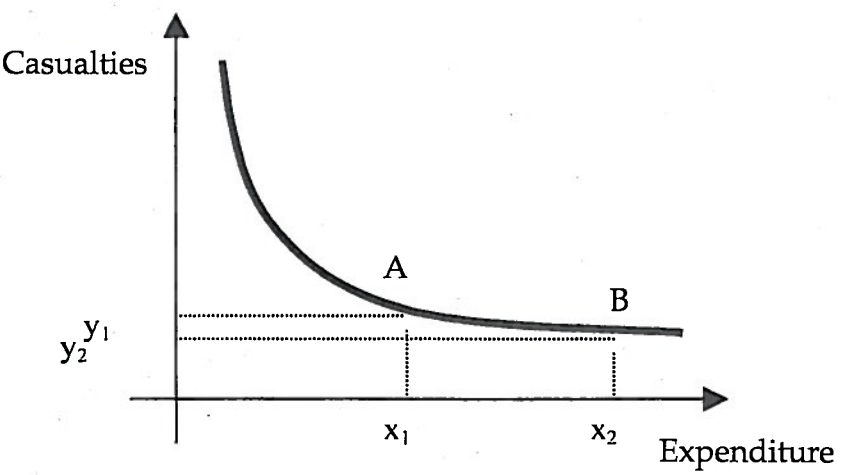
Israel's decision-makers must project confidence and leadership to the public, rather than be influenced by the media, narrow political interests, or public opinion polls. They must set a policy that balances civil defense against the need to project power. Elements of this policy should include the following:

a. Deterrence is a central instrument for dealing with the missile threat and should take priority over defensive measures. Deterrence and active measures against the threat of missiles should reduce the expense of passive protection measures.
b. Israelis must feel they are receiving a minimal standard of protection. This will reduce pressure on the political leadership and allow it to make clear-headed decisions in times of tension.
c. Investment in early warning systems is the most effective way to improve civil defense.
d. Reducing the population of cities believed to be targets of enemy missiles would limit the number of casualties. To preserve morale, however, this should not be stated policy.
e. Authorities should not significantly change civil defense doctrine. They should maintain such components as sealed rooms and masks.
f. Funding of passive defense should be guided by national rather than by partisan interest. The following graph illustrates the relationship between expenditure on population protection and the number of casualties. The graph shows two points: A and B. Moving from Point A to Point B requires extensive resources (the difference between X1 and X2), while reduction in the number of casualties is marginal (the difference between Y1 and Y2). This means that expenditure on passive defense must be made according to the location on the graph.

Today, Israel is at A, a point the nation should not exceed. The government would not significantly gain in protection even from a huge additional investment. A simple sealed room provides reasonable protection against chemical and biological weapons and even a sophisticated filter system would not significantly improve this.

In short, the government should seek to maintain a uniform level of survivability rather than provide all residents with the same quantity of equipment. As during the Gulf war, authorities should classify regions by the likelihood of enemy attack. Based on these guidelines, the priorities in passive-defense should include the following:

a. **Protected areas within private dwellings:** Construction standards should be eased in regions deemed as unlikely to come under enemy missile attack. Building codes should seek to ensure the survival of residents rather than protection of property. The emphasis must be on providing



reasonable protection to the population. One method is to locate the most secure area of an apartment and use it as a shelter rather than require that every structure include concrete-reinforced rooms.

b. **Protective measures within public buildings:** The government should not invest heavily in protecting public buildings or areas. This is based on the assessment that during an emergency, people will have no reason to use these institutions. Again, standards should not be uniform. For example:
   1. **Protective means at cinemas:** Authorities should not fund or order the protection of cinemas. They can assume that during emergencies few will attend screenings.
   2. **Protective means at schools:** Authorities should not allocate significant funding for the protection of schools. During an emergency, schools will not be open anyway. Minimal funding, however, would encourage parents to send their children to school during periods of tension.
   3. **Protective means at hospitals:** Unlike schools, many patients will not be sent home during a military emergency. As a result, hospitals must be protected and given sufficient resources to ensure they operate during and following a missile attack.

ABC Masks

Government policy must also address the utility of ABC masks. One question is whether every resident requires protection. Some areas of Israel are believed to be low-risk targets and their residents would not need masks. Still, policymakers would probably have difficulty convincing these Israelis to return their civil defense equipment.

Another question: should the government fund development of improved ABC masks. The answer appears to be yes. Masks could be made more comfortable and ensure a higher rate of use during a missile attack. A new mask could also have a longer shelf-life and probably cost less than those already distributed.

In any case, the government should not allocate more funds for the manufacture and distribution of masks. If the new models are more expensive or have a shorter shelf-life than their predecessors, authorities should be selective in distributing the new equipment. Authorities, however, should never be seen as acting under pressure in their effort to replace or distribute masks.

Another issue regards the purchase of antibiotics and inoculations. These supplies are required to treat those exposed to biological agents. Despite their importance, supplies should be kept to a minimum. Again the message is the key. Israel must focus on deterrence rather than store a huge supply of medicine to counter the threat of a nonconventional weapons attack.

Summary

Civil defense deployment aims to prevent attack and limit damage in case of war. Deterrence is the key while passive defense is a secondary element. A deterrent posture and active anti-missile measures should reduce expenditures in passive defense.

Several simple measures can be employed to protect Israelis against conventional, chemical, and biological weapons.

The policy of distributing civil defense protection kits should be based on ensuring uniform survivability. The amount and type of equipment should differ depending on the region's perceived vulnerability to attack.

The government should try to reduce expenditure on passive protection. Even a huge additional investment would only marginally reduce the number of casualties.

Government leaders have a key role to play in civil defense. Their behavior could mean the difference between a public that is calm or frightened. Leaders should explain policy and reduce fear and pressure to intensify passive defense measures, particularly the premature or large scale distribution of masks and protection kits.

The government should not encourage evacuation of high-risk areas. But authorities should not prevent or criticize urban flight. Instead, they should facilitate the evacuation to prevent panic.