

# LEARN ABOUT NUCLEAR WEAPONS

## *To be or not to be (a nuclear weapon state)*

Israel's nuclear weapons have been called "the world's worst kept secret". It is generally accepted that Israel possesses nuclear weapons, although Israeli officials have never confirmed their existence. On a few occasions during the last several years, however, Israeli officials have given themselves away. In December 2006, Prime Minister Ehud Olmert appeared in a televised interview in Germany. He said: "Iran openly, explicitly and publicly threatens to wipe Israel off the map. Can you say that this is the same level, when they are aspiring to have nuclear weapons, as France, America, Russia and Israel?"<sup>1</sup> Similarly, Dr. Ariel Levite, the deputy director-general of the Israel Atomic Energy Commission, made a statement at a conference in January 2007. In his statement, he grouped Israel together with the other nuclear threshold states outside the NPT: India and Pakistan.<sup>2</sup> Both Olmert and Levite have later denied ever saying Israel is a nuclear weapon state. The Federation of American Scientists (FAS) estimates the Israeli arsenal to hold approximately 80 warheads.<sup>3</sup>

The Israeli nuclear weapon programme started in 1956, with assistance from France. The country does not appear to have conducted a nuclear test, although some reports maintain that Israel cooperated with South Africa in the atmospheric test over the southern Indian Ocean on 22 September 1979. Israel has two prominent nuclear research centers, with facilities for reprocessing nuclear waste to weapon-grade plutonium. Some sources also claim the country has enriched uranium for nuclear weapons.<sup>4</sup>

## *Mordechai Vanunu - hero or traitor*

Mordechai Vanunu is known as the whistle blower who revealed that Israel has nuclear weapons. He is a former Israeli nuclear technician, who was kidnapped and imprisoned in 1986 after revealing Israel's nuclear weapons programme on British television. Vanunu spent 18 years in Israeli prison – 11 in total isolation. In 2004, Vanunu was released, but was placed under severe restrictions upon his freedoms of movement and speech. Since then he has been re-arrested several times and served shorter terms. Vanunu is considered a hero by many, but is seen by others as a traitor.

### *The doctrine of ambiguity*

Israel's nuclear doctrine is a policy of ambiguity – if nuclear weapons exist, where they are, how many there are, and under what circumstances Israel would consider using them. The exact size of the Israeli nuclear arsenal is unknown. Estimates range from 75 to 400 warheads, based on the two-three dozens of nuclear warheads that Mordechai Vanunu revealed in 1986<sup>5</sup>, with estimates on fissile material production added. The Federation of American Scientists (FAS) estimates the Israeli arsenal holds approximately 80 warheads.<sup>6</sup>

### *Nuclear capacity*

The amount of Israeli fissile material for nuclear weapons use is likewise surrounded by uncertainties. A 2005 global fissile material inventory makes an estimate possible. According to this, Israel, at the end of 2003, had 0.56 tonnes of military plutonium and 0.034 tonnes of civil highly enriched uranium (HEU)<sup>7</sup> The amount of weapon-grade uranium or plutonium needed to produce a bomb depends on the technical capacity of the producers and the desired yield.<sup>8</sup> American intelligence reports from late 1990s claim that Israeli nuclear weapons can be launched by ground-based missiles or bombers, while other reports claim that Israel also has nuclear capable submarines.<sup>9</sup>

Israel is not a member of the NPT and has not ratified the CTBT.

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1 Quinn, Ben, "Olmert admits Israel has nuclear weapons". The Telegraph, 13 December, 2006.

<http://www.telegraph.co.uk/news/main.jhtml?xml=/news/2006/12/12/uisrael112.xml>

2 Pfeffer, Anshel. "Israel is a nuclear threshold state". The Jerusalem Post, 22 januari, 2007.

<http://www.jpost.com/servlet/Satellite?pagename=JPost%2FJPArticle%2FShowFull&cid=1167467784060>

3 Federation of American Scientists <http://www.fas.org/programs/ssp/nukes/nukestatus.html>

4 Johnston Archives <http://www.johnstonsarchive.net/nuclear/wrjp442.html>

5 Federation of American Scientists [http://www.nti.org/e\\_research/profiles/Israel/Nuclear/3580.html](http://www.nti.org/e_research/profiles/Israel/Nuclear/3580.html)

6 Federation of American Scientists <http://www.fas.org/programs/ssp/nukes/nukestatus.html>

7 Institute for Science and International Security

[http://www.isis-online.org/global\\_stocks/end2003/summary\\_global\\_stocks.pdf](http://www.isis-online.org/global_stocks/end2003/summary_global_stocks.pdf)

8 Nuclear Notebook, vol. 63, nr. 3, 2006 p. 71-73,74: Norris, Robert S, Kristensen, Hans M.

9 Federation of American Scientists <http://www.fas.org/nuke/guide/israel/nuke/index.html>