

reports that Iran is now mass producing an indigenous tactical artillery rocket named Oghab. Teheran has also allegedly received assistance from China for the production of the guided missile known as the Iran-130. Like Syria, it may also have tried to obtain from the Chinese the more capable M-9 missile.

While Iran is believed to be many years away from a nuclear weapons capability, it made limited use of chemical weapons during the Gulf War, and may be close to developing chemical warheads for its missiles. Iran may also be seeking a biological warfare capability. In 1989, it was disclosed that in December 1988, Iran tried to purchase toxins in Canada and the Netherlands, probably for a biological weapons research programme.<sup>11</sup>

### *Egypt*

Egypt's missile inventory includes Frog-7 and Scud-B missiles. Egypt has also cooperated with a number of countries to improve and enlarge its missile arsenal: with Argentina and Iraq on the now abandoned Condor missile programme (or Badr-2000 as it was called by Cairo); with North Korea for the production of an upgraded Scud-B system; and, with Iraq for the production of an unguided rocket of 80 km range called the Sakr-80, which apparently Cairo already possesses and may have deployed.

### *Saudi Arabia*

Saudi Arabia's acquisition of Chinese CSS-2 missiles (also known as DF-3) was disclosed in March 1988. The concern over this transfer lies in the capability of the missile. Indeed, although the CSS-2 reportedly has poor accuracy, its range may well be in excess of some 2,500 km (estimates vary between 2,200 and 3,500 km). Apart from its range, the CSS-2 raises concerns precisely because it is inaccurate. This inaccuracy suggests that the missile might not be used with conventional weapons. Conventional weapons require pin-point delivery in order to destroy their target, whereas weapons of mass destruction do not. It should also be noted that the Chinese version of the CSS-2 has been designed to carry nuclear weapons.

In an effort to respond to these concerns, however, Riyadh signed the 1968 Non-Proliferation Treaty (NPT) thus committing itself not to acquire nuclear weapons. Saudi Arabia has also promised not to use the missiles with chemical weapons.

### *Libya*

Tripoli possesses an impressive inventory of Frog-7 and Scud-B missiles acquired from the Soviet Union in the 1970s. Since then, Libyan leader Muammar al-Qaddafi has tried to obtain more powerful systems,

including, the Chinese CSS-2 missile, the Soviet SS-23, and a yet to be developed 1,000 km range missile from Brazil. It has also been reported that Libya sought assistance from a West German firm, Otrag, to develop a 300 to 500 km range rocket.

Even though Libya has signed the Non-Proliferation Treaty, its nuclear ambitions have never been completely dismissed. In 1981, senior Libyan officials held meetings with a former CIA employee to acquire nuclear weapons on the black market.<sup>12</sup> In addition, Libya's efforts to acquire a chemical weapons capability were well publicized in the late 1980s when it began operations at a chemical plant at Rabta.

Not only has Libya acquired ballistic missiles, it has shown a willingness to use them. In 1986, in retaliation for the US raid on Libya, it launched Scud-B missiles against the US Coast Guard station on the Italian island of Lampedusea: the missiles fell short of the target.<sup>13</sup>

### *ASIA*

The ballistic missile competition in Asia is taking on alarming proportions. The dominant actors include India, Pakistan, North Korea, South Korea and Taiwan.

#### *India*

India's missile programme is believed to derive from its space programme which began in the late 1960s, and is now one of the most advanced in the world. In 1980, India became the seventh nation in the world to place a satellite in low orbit with an indigenous launch vehicle.

The two most important Indian-developed missiles are the Prithvi and the Agni. While the Prithvi is believed to be very accurate, and capable of carrying a nuclear weapon over a range of some 250 km, little is known about the Agni. It is suspected, however, that upon completion, it might have 10 times the range of the Prithvi.

India's ability to place a satellite in orbit suggests it has mastered most of the hurdles of developing an intermediate-range ballistic missile. Furthermore, because India is already working on a geostationary launch vehicle (GSLV), the possibility that it could develop an intercontinental-range ballistic missile cannot be dismissed. Long-range missiles would allow India to strike targets in China, with which it has clashed in the past.

India's missile programme raises particular concerns because it tested a nuclear device in 1974, and has refused to sign the Non-Proliferation Treaty. Moreover, India has fought three wars with Pakistan. The two nations have since come close to a conflict on at least three other occasions, the most recent in the summer of 1990.