

nuclear weapon state to manufacture or acquire such weapons or devices. Article II pledges the non-nuclear weapon states not to receive nuclear weapons or other nuclear explosive devices or control over them, as well as not to manufacture them or receive assistance in their manufacture.

The implementation of the first part of Article I prohibiting transfer of nuclear explosive devices, though unverifiable, has not given rise to formal complaints. The extent to which the second part of Article I has been observed — that part prohibiting the provision by the nuclear weapon states of assistance in the manufacture of nuclear weapons — has lent itself to controversy. Since there exists a significant overlap between the technologies of civilian nuclear energy and those useful for military explosive purposes, and since nuclear material and technology nominally destined for power programmes have been exported by NPT parties to countries which have not formally forgone nuclear weapons, it is argued by some that the obligation not in “any way” to assist non-nuclear weapon states to manufacture nuclear explosive devices has not been fully complied with.

As regards Article II, there is no evidence that any non-nuclear weapon state party to the NPT has clandestinely manufactured or otherwise acquired nuclear explosive devices. If any one of them has designed a nuclear weapon or even developed its non-nuclear components, these activities would be difficult to detect. Should such a state ever decide actually to produce a nuclear weapon, it would need the requisite quantity of weapon-grade fissile material. The availability of this material is, therefore, of crucial significance; hence the importance of safeguards to prevent its diversion from peaceful to military uses.

Nuclear Safeguards and Protection of Nuclear Material

The safeguards requirement under Article III constitutes the verification element of the NPT. Safeguards should enable detection of diversion of significant quantities of nuclear material from peaceful activities to the manufacture of nuclear explosive devices, as well as deterrence of diversion by creating the risk of timely detection. No such diversion has as yet been reported by the IAEA, although on several occasions the Agency has been hindered in its inspection activities.

The Treaty requires safeguards to be implemented in such a manner as to avoid hampering the economic or technological development of the countries party to it or international cooperation in the field of peaceful nuclear activities. This requirement seems to have been met, although there have been some complaints that controls complicate the production process or are a burden for enterprises because of the cost and the threat to industrial secrets. More controversial is the clause setting forth the conditions for nuclear trade with non-nuclear weapon countries. This clause has been applied in a way that has sometimes benefited non-parties more than parties. For whereas parties are subject to NPT safeguards covering all their peaceful nuclear activities, the nuclear activities of

non-parties are covered only partially, by safeguards of the pre-NPT order, which apply exclusively to imported items — individual installations or material — while part of the nuclear fuel cycle may remain unsafeguarded. Many suppliers concerned about the dangers of nuclear proliferation inherent in the distinction between imported and domestic technology have sought to impose on non-parties full-scope safeguards, as extensive as NPT-type safeguards. A few suppliers, however, are reluctant to modify radically their export conditions.

An important step towards reducing the risks of diversion of nuclear material to non-peaceful purposes was made in 1987, with the entry into force of the 1980 Convention of the Physical Protection of Nuclear Material. The provisions of the Convention oblige the parties to ensure that, during international transport across their territory or on ships or aircraft under their jurisdiction, nuclear material for peaceful purposes, as categorized in a special annex (plutonium, uranium-235, uranium-233 and irradiated fuel), is protected at the agreed level. Furthermore, the parties undertake not to export or import nuclear material or allow its transit through their territory unless they have received assurances that this material will be protected during international transport in accordance with the levels of protection determined by the Convention. The parties to the Convention agree to share information on missing nuclear material to facilitate recovery operations. Robbery, embezzlement or extortion in relation to nuclear material, and acts without lawful authority involving nuclear material which cause or are likely to cause death or serious injury to any person or substantial damage to property, are to be treated as punishable offences.

Towards the end of 1987, alarm was raised in the Federal Republic of Germany and Belgium because of alleged illegal cross-border transportation of canisters with nuclear wastes. It was asserted that at least some canisters were falsely labelled and actually contained fissionable material destined for Pakistan and Libya. No evidence was supplied to support this allegation. It seems, none the less, that some serious irregularities in the transportation of radioactive substances did take place. It is noteworthy that by January 1989 the members of the European Community had not ratified the Physical Protection Convention, even though shipments of nuclear material in the territories of the Community are very intensive.

Peaceful Uses of Nuclear Energy

Article IV of the NPT reaffirms the right of parties to develop nuclear energy for peaceful purposes in conformity with Articles I and II of the Treaty and obligates those parties in a position to do so to contribute to such efforts in non-nuclear weapon states. The implementation of Article IV has been affected to a great extent by the worldwide slow-down in the growth of civilian nuclear power owing to environmental, safety and economic factors, which include a weak increase in