

presented in two general sections and summarized as follows:

IAEA safeguards

The agency, in pursuing the second of its two major objectives, carries out a unique task — the safeguarding by an international body of nuclear materials and equipment intended for peaceful use within a country in order to prevent their diversion to warlike purposes. Under this safeguards system, a country must accept safeguards for any nuclear project with which the agency is directly associated. In addition, states party to a bilateral agreement may request the agency to apply safeguards in one or both countries. States may also unilaterally submit facilities or nuclear materials to IAEA safeguards.

A major step forward took place in March 1970 with the entry into force of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT). This instrument requires all non-nuclear-weapon states parties to conclude safeguards agreements with the IAEA covering all nuclear materials used in all their peaceful nuclear activities. By mid-1977, 100 states, including three nuclear-weapon states (the U.S., the Soviet Union and Britain), were parties to this treaty; at present, only five states (Egypt, India, Israel, South Africa and Spain) with significant nuclear programs are not subject to agency safeguards.

The IAEA safeguards system is based on nuclear-material accountability, with containment and surveillance as important complementary measures. This system operates in four main steps: (1) the agency checks the design of the national facilities of the state concerned in order to ensure that the design permits effective controls; (2) the state is required to keep detailed records of plant operations as well as of the flow and inventory of nuclear materials; (3) the state must submit periodic reports to the agency based on those records, and (4) the agency sends inspectors, with the agreement of the government concerned, for on-the-spot checks on the nuclear facilities of the country concerned.

Other programs

(a) Nuclear power and reactors

Since the energy crisis of 1973, the growth of nuclear power has accelerated considerably, the rate in the industrialized countries being approximately 28 per cent a year. A similar rate of growth is also being experienced in a number of developing countries. This has made even more essential long-term planning and international co-operation in this field. Accordingly, the IAEA is carrying out studies of the entire nuclear-fuel cycle, as well as facilitating the exchange of relevant information between governments. This information is of considerable value to all