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Dr Blix greets the Conference President, Ambassador Adonit Manouan of the Ivory Coast.

# Strengthening global efforts for development

Highlights of the **Director General's** annual address

In remarks at the Agency's 29th General Conference, IAEA Director General Dr Hans Blix appealed for greater global co-operation to harmonize divergent interests and strengthen nuclear energy's peaceful contributions to worldwide development. The areas included the international safeguards system, nuclear waste disposal, technical co-operation, and nuclear power and trade.

# Nuclear waste disposal

International approaches - including the possibility of joint waste repositories - should be more fully considered to solve problems of nuclear waste disposal, the Director General suggested. There is justifiable "international interest' and concern in the national disposal of highly radioactive waste, he said, just as there is in other environmental questions of our time. It is not a "matter of indifference" how individual countries approach nuclear waste management, he said. "Large, well-organized, well-located, and well-equipped sites would seem preferable to a host of smaller sites."

Some countries, he noted, have very small nuclear programmes, others do not have geologically ideal disposal sites, while still others have delayed or cancelled nuclear programmes due to the waste question. "Are such countries to be deprived of nuclear power or be obliged to spend disproportionate sums on disposal sites which do not offer the advantage of large-scale operations? ", Dr Blix asked.

Prospects for regional or international waste management solutions have improved of late, he said, and interest has surfaced. A few countries have offered to accept waste from foreign power plants, he noted, and the Commission of the European Communities has argued that "such a solution would seem indispensable" for countries with limited nuclear programmes. An IAEA expert working group also has suggested international co-operation in spent fuel management.

development of advanced concepts and techniques for off-site reactor spent fuel installations and waste disposal plants, he said. A few years ago, "contemplating an international dimension to such facilities was probably more than could be asked," he said. "Today it does not seem unreasonable to urge the planners concerned to consider what economic and other advantages might be derived from designing capacities which would allow for the storage of some foreign spent fuel or disposal of some foreign waste."

The most important factor, however, may be the

# International safeguards

Wider international acceptance of, and public confidence in, the safeguards system that verifies the peaceful use of nuclear facilities are fundamental to its credibility, effectiveness, and development, the Director General stated. "I think the public would feel, as I do, that safeguards are a spearhead into a world of more mutual confidence, an instrument that governments might use more extensively, for example to create confidence about the peaceful confinement and use of the growing quantities of plutonium," he said.

To maintain and strengthen the high level of credibility and acceptance achieved so far, the safeguards system must be further consolidated and divorced from severe funding constraints, he said. "Zero growth cannot be enforced as a straightjacket," he said, since the IAEA is bound by Statute and international agreements to carry out activities whose size and scope necessarily depend primarily on the growth of nuclear programmes around the world.

Dr Blix noted that significant safeguards agreements entered into force or were being negotiated this year. On 10 June, the agreement with the Soviet Union entered into force, and the first inspections were carried out in August at one nuclear power station and one research



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reactor in the Soviet Union. He noted that four nuclearweapon States now have agreements with the IAEA accepting safeguards on facilities in their peaceful nuclear sectors.

The Director General also reported that agreement had been reached in most cases on facility attachments relating to the safeguarding of centrifuge enrichment plants. Two facility attachments, for the Almelo plant in the Netherlands and the Ningyo plant in Japan, now have entered into force, he said.

Negotiations concerning safeguards in South Africa continue, Dr Blix said. Although there has been no response from South Africa on the question of general acceptance of safeguards, he reported that safeguards for a semi-commercial enrichment plant in South Africa were discussed extensively in 1985, with technical sessions being held in both Vienna and at the South African plant.

# **Technical co-operation**

Nuclear techniques in industry, food and agriculture, health, and other fields are being more widely applied for social and economic development through technical assistance and co-operation activities, the Director General noted. The programme's total resources have nearly doubled since 1980, reaching US \$36 million, and the number of regional and interregional projects has grown dramatically, he said. Receiving particular emphasis, Dr Blix stated, are activities in Africa related to food and agriculture. More than 40% of the Agency's technical co-operation projects in these fields are in Africa, he said, "thereby contributing to the UN system's efforts to face the emergency situation in Africa and to link relief assistance to a process of sustainable development".

# Nuclear trade

In the nuclear trade environment, changing market conditions in enrichment and reprocessing have contributed to a "somewhat improved climate", Dr Blix reported. In turn, some "practical measures" to facilitate international co-operation have been developed by IAEA's Committee on Assurances of Supply (CAS), the international forum for nuclear trade discussions since 1980. From the outset, the central question has been to balance the interests of buyers, who desire smooth trade of parts, fuel, and relevant technologies, and suppliers, who require assurances that nuclear supplies will only be used for peaceful purposes.

The measures cover alleviation of technical and administrative problems in international shipments; emergency and back-up mechanisms; and mechanisms for the revision of intergovernmental co-operation agreements in the nuclear field. Differences of opinion on general principles of international co-operation in nuclear energy have been "narrowed down", Dr Blix said.



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The Director General made the following other points:

• Nuclear economics. The economic picture for nuclear power electricity generation has become "even more positive than a few years ago", Dr Blix stated, because of longer operating cycles and new types of fuel, among other factors. Plant availability has improved "remark-ably", he said, bringing it up to the 70 to 80% range in several countries. A key performance measure — the average load factor — increased worldwide to 69% last year, he reported, about 5 points higher than it had been.

• Nuclear generation. The world's total installed nuclear capacity in 1984 registered its largest annual increase since the early 1970s, Dr Blix reported. It rose by 17%, as 34 new nuclear power units were connected to the grid in 13 countries. (At the end of 1984, the world's 345 nuclear power plants were supplying about 13% of all electricity.) The record, Dr Blix stated, shows that "nuclear power ..... remains one of the few realistic power options for the foreseeable future and one which, indeed, meets some of the pressing environmental concerns of our time".

• Energy planning. The nuclear industry is showing greater interest in smaller nuclear reactors, typically those below 600 megawatts, Dr Blix reported, citing results from an IAEA study completed this year. The study indicated that suppliers, unlike the situation 10 years ago, are now ready to offer smaller reactors for export and that potential buyers in developing countries are expressing renewed interest as well. Likely next steps are economic feasibility studies for particular situations.

• *Nuclear safety*. Years of successful operation "without any serious accidents" are gradually having a "positive impact on the image of nuclear power",



An interpreter's booth in the Festsaal, where delegate speeches and session debates are simultaneously interpreted into one of several languages. (Credit: J. Daglish).

Dr Blix stated. "The increased attention to management, training and operation is paying off not only in better reliability and economy, but also in greater public confidence." The Director General noted that countries are increasingly taking advantage of IAEA activities in areas of radiation protection, operational safety, and incident reporting, for example, to support and improve their own national programmes.