

Is proliferation unstoppable?

In a mere eighteen months' time the Non-Proliferation Treaty (NPT) will come up for its second review conference. The treaty, which came into force in 1970, is intended to prevent non-nuclear-weapon states building their own nuclear devices or receiving them from any other source; in return nuclear-weapon states promise not to transfer nuclear explosives, nor to help others build their own. A majority of all nations adhere to the treaty, but there are a number of potentially nuclear countries who have kept out. West Germany, Japan, Sweden and Switzerland are in, but Argentina, Brazil, France, India, Israel, Pakistan, People's Republic of China and South Africa are not. This latter group contains, of course, three nuclear states, two of which are widely regarded as virtually nuclear and others which could harbour nuclear-weapons ambitions. So the NPT could hardly be said to be an unqualified success.

The first review of the treaty came up in 1975 and was not a happy occasion. The superpowers wanted to emerge unscathed from the conference and were largely successful. The price for this, however, was growing dissatisfaction amongst non-nuclear-weapon states, notably Mexico and Yugoslavia, at the way their self-denial had met with no real promises of restraint on vertical proliferation. In the event no-one withdrew from the treaty, but on the other hand no outsider proceeded to sign.

The 1980 conference could be much more of a cross-roads. Certainly the superpowers will bring a new Strategic Arms Limitation Treaty, and, most likely, a short-duration Comprehensive Test Ban as evidence of self-restraint, though both of these will be heavily criticised. But the real issues will probably be elsewhere. In the past few years, security of future energy supply has tended to supplant other world concerns, including nuclear proliferation. So uranium enrichment, reprocessing and breeder reactors are likely to be topics of importance at the 1980 conference, and the central debate could well focus on the right of nations to have access to these facilities. The Stockholm International Peace Research Institute, SIPRI, has recently held a conference to look at the control of fissionable materials in non-military applications, with a view to stimulating thought on these matters during the run-up to 1980. There are clearly many areas of great concern. Traditional methods of uranium enrichment could be challenged soon by jet-nozzle and vortex-tube techniques in West Germany and South Africa, as well as by laser separation methods. Reprocessing facilities capable of supplying plutonium are being developed in several countries with an eye on export and with the apparent justification of the Non-Proliferation Treaty itself, whose Article IV urges states to cooperate in the further development of peaceful uses of nuclear energy. The technological momentum of breeder research and development is making that device look like the logical next step for some nations, and it has the appeal of enormous savings on resources. Enrichment, reprocessing and breeding all look attractive in the absolute, but all open new doors to the more widespread circulation of weapons-grade materials.

What, the SIPRI meeting asked, is to be set against these proliferative trends? The answer seems to be that no one measure, whether technological, political or institutional

can in itself stem the tide for long; the best that can be hoped for is that by applying as many restraints as possible and in as many ways as possible, non-nuclear countries considering the acquisition of nuclear weapons delay long enough for new attitudes to have emerged, both towards proliferation and towards the role of nuclear energy in national energy strategies. Amongst subjects discussed were the possibility of the International Nuclear Fuel Cycle Evaluation (INFCE) coming up with something valuable; the chances that an Advanced Converter Reactor development in the United States would lead to efficiencies which made a breeder reactor seem unnecessary, at least for the present; possible use of denatured fuel; moratoria on various enrichment technologies and problems posed by fusion-fission hybrids, particularly using inertial confinement techniques. And yet the question ultimately is not technological but political and institutional. Energy independence has become a target, and with many years of almost unbridled enthusiasm for the atom not only in national but also international agencies there is much to be done before new attitudes emerge.

The most overtly political and apparently progressive move so far—President Carter's 1978 Non-Proliferation Act—has not been well-received everywhere. The Act puts strong controls on trading of nuclear materials and equipment originating in the United States, but in exchange tries to assure adequate safeguarded supplies to those countries which co-operate and which have ratified the NPT. Carter has also, of course, been running down domestic development of reprocessing plants and plutonium breeders. Some nations well along the nuclear road have felt this legislation to be discriminatory and unreasonable, even to the extent of wondering whether the United States, whose breeder development was in any case lagging, was not adopting a pious stance based simply on commercial opportunism. In truth Carter's proliferation concern runs much deeper than that, but the last year has shown how unfortunate it is that commercial and national interests are so deeply woven into a fabric already criss-crossed with technological and international problems.

An idea put forward at the SIPRI meeting by A. R. W. Wilson, of Australia, could provide a way out of this bind. He proposes a nuclear fuel supply co-operative of states dedicated to meeting each others' fuel and service requirements whilst minimising the risk of proliferation. Each member would undertake to agree safeguards with the International Atomic Energy Agency (IAEA) and to restrict its access to enrichment and reprocessing facilities, whether on its own or another country's territory, simply to that amount of fuel deemed necessary by the IAEA for the country's power programme. Internationally controlled facilities would not be excluded from the co-operative's activities. The emphasis in the co-operative would be on mutual benefit rather than on surrender of national sovereignty.

This deserves extensive discussion. Much of the criticism of current non-proliferation measures is their sharply discriminatory character; Dr Wilson's proposal would represent a move towards benefit-sharing and should be widely attractive. □