

The peace of the world may not be quite as precarious as it was a few years ago, but the dangers are still real. The Moscow Partial Test-Ban Treaty of 1963 has stopped many -- but by no means all -- of the nuclear explosions that contaminate our atmosphere. To some extent this treaty can be looked upon as a major public-health measure rather than as arms control. Our newspapers no longer give us those daily fallout readings to remind us that nations are developing nuclear weapons to even higher levels of effectiveness. But the testing goes on underground -- this kind of activity has accelerated since the signing of the partial test ban -- and the development of ever more sophisticated nuclear weapons continues.

With these realities in mind, many states of the world, including Canada, have concluded that the time is ripe for a renewed and determined effort to achieve a ban on underground nuclear tests as an extension of the partial test ban of 1963. Seismological investigation, investment in improved facilities, and the possibility of international co-operation in seismic-data exchange have all begun to give grounds for believing that adequate seismological methods of discriminating between underground nuclear explosions and natural seismic events can be found. Problems and ambiguities remain -- particularly with explosions of extremely low yield, where verification trails off into the realm of the improbable. But the potential for seismological identification has sharply narrowed and made more manageable the issue of on-site inspections that has for too long bedevilled efforts to achieve an underground test ban.

The verification problem is in the last analysis a political rather than a technical question and, in our view, as well as that of a very large number of non-nuclear nations, the time has come for the two major nuclear powers to take up their efforts to resolve this problem where they left off eight years ago. At the same time, we should not ignore the desirability of all nuclear powers adhering to the Moscow Treaty and joining with others in an effort that would lead to a complete ban on all nuclear tests. Until such a ban can be reached, I urge the two major nuclear powers to scale down their underground tests, starting with the biggest.

As I address you today, I am aware -- uneasily aware -- of the fact that a quarter of mankind, the people of China, is unrepresented amongst us. I accept the assurance of Mr. Chou En-lai that Chinese intentions are peaceful, but I am sure we shall all be happier when the representatives of that ancient civilization and powerful modern state are taking part in our deliberations rather than observing them in silence. Canada will do all it can to ensure that this is the last conference on nuclear energy in which a quarter of mankind -- and a nuclear power -- goes unrepresented.

In the 16 years since our first conference in 1955, nuclear scientists and engineers have forged ahead. In most situations, large quantities of electricity can now be produced by the fission of uranium as cheaply as by burning coal or oil. Fears of a world energy crisis have been postponed, perhaps for centuries. It is now our task to apply the technology that has been developed to bring to all men a supply of energy sufficient to meet their needs. The technology is ready, the world needs electricity, and we can expect to see a continuing shift away from new fossil-fuel stations toward new nuclear stations.