



The Holy See

*Letter of His Holiness John Paul II
to H.E. Ismat T. Kittani, President of the 36th General Assembly of the United Nations
Organization**

14 December 1981

1. For some months, public opinion throughout the world has been especially preoccupied by the problem of nuclear weapons, particularly in the countries in the possession, or the feared use, of such deadly arms. The reason for this preoccupation is that the men and women of our time are becoming ever more conscious of the terrible and catastrophic consequences connected with the use of such weapons, consequences which would unleash immense death dealing forces which are practically without escape or remedy.

To this most serious problem of our time, I have already made reference when, on 2 October 1979, it was granted to me to address the Thirty-fourth General Assembly of the United Nations Organization. On that occasion, in speaking of the frightening development of weapons which far exceed the instruments of war and destruction ever before known, I pointed out the risk involved in the possible use of so terrible a means of general destruction.

Subsequently, on the occasion of the celebration of the Thirteenth Day of Peace, 1 January 1980, I mentioned an overall forecast, given to me some time earlier by a group of scientists, of the immediate and terrible consequences of a nuclear war, with concrete reference to the immediate or delayed deaths caused by such action, the reduction of food resources, dangerous genetic mutations, alterations in the atmosphere and the destruction of all urban services.

Nor did I consider it possible to remain silent about this distressing possibility when, on 2 June of the same year, I spoke to the United Nations Educational, Scientific and Cultural Organization. On that occasion, knowing of what particular concern the problem is to many scientists it seemed to me to be appropriate to extend to the scholars and experts in all sectors of modern science gathered there, and through them to their colleagues and friends in all countries and continents,

an invitation to commit their moral authority to the saving of humanity from nuclear destruction!

2. In recent days, it has seemed useful to me to express my thoughts on this pressing and important question to the Heads of State of the countries which possess nuclear weapons. And given the fact that this is a problem that affects every country of the world, I also wish to express to yourself, and through you to the countries which are members of the United Nations Organization some specific reflections in this regard. To this end, I have the honour to present to you a Delegation from the Pontifical Academy of Sciences, which will describe the results of a recently completed study on the disastrous immediate and delayed effects which a nuclear war should have on the areas affected. This very accurate study has been made by the same Academy, also assisted by other eminent figures who are not members.

It is tragically evident that any nuclear war would inevitably inflict humanity with death, disease and suffering in such proportion that there could be no effective recourse therefrom. Medical Intervention would be futile. The radiation would provoke irreversible brain damage in huge sectors of the population, and genetics damage would be transmitted to any future generations that would be born after the conflagration. Should a nuclear attack be directed only at military objectives, the entire country would, nevertheless, be devastated: the combined medical facilities would not begin to meet the needs, and the whole population would be immersed in catastrophic social disruption. Food production would subsequently be paralyzed and the water supplies affected; the state of staggering confusion in society would be accompanied by the deleterious biological and geo-physical effects of the nuclear disaster. In view of these and other aspects, the only possible choice is that of total prevention. There is no other recourse conceivable. The last great epidemic of our civilization can be prevented only by putting an end to the arms race.

3. A thorough examination of the studies made confirms the conclusion that it is therefore impossible to ward off previously, or to limit afterwards, the disastrous effects that are foreseen as a certain result of the use of such weapons. The destruction caused would be so radical and would so seriously damage the area affected as in fact to leave no alternative to death and no escape therefrom.

The prospect of such effects reduces to relative insignificance the tragic image of the cities which I visited last February, cities which have the bitter privilege of passing into history as indissolubly linked with the destruction caused by weapons which were in fact less destructive than those available today.

It is no less worrying to see public opinion seemingly growing accustomed to the idea that the use of such murderous weaponry, previously considered to be quite unthinkable, is now becoming possible, if not probable. I am deeply convinced, and I think that you are too, that our generation has the moral duty to spare no effort to exorcise the spectre of nuclear war and to banish the temptation to yield to the idea that it is something inevitable. This duty falls in a particular way on

those whose options and decisions can influence the course of history.

With deferential regard, and solely by reason of the spiritual and universal mission entrusted to me, I wish, with your help, to address to the Governments of the countries which are members of the United Nations, even if they do not possess nuclear arms, an invitation to do all in their power to smooth the path towards a future in which the probability of such a terrible hypothesis will be definitely removed.

I am sure that every Government - while having the responsibility of ensuring the defence of its own country - is animated by a sincere desire to avoid for its own people and for the entire world the horrors of nuclear war. The conviction that the same desire animates the leaders of countries in possession of such weapons prompts me to express the hope that a way may be found of encouraging them to promote joint efforts of good will for reaching a notable reduction of such armaments, with a view to their complete elimination.

This is the hope that I shall continue to express in my prayers, as I invoke the aid of Almighty God in the certainty that the same hope is shared and invoked by millions and millions of human beings throughout the world.

Trusting that you will favourably accept these reflections, I assure you of my highest consideration

STATEMENT BY THE PONTIFICAL ACADEMY OF SCIENCES ON THE CONSEQUENCES OF THE USE OF NUCLEAR WEAPONS, attached to the Letter of the Pope to the President of the General Assembly.

On 7-8 October 1981, under the chairmanship of Professor Carlos Chagas, President of the Pontifical Academy of Sciences, at the headquarters of the Academy (Casina Pius IV, Vatican City), a group of fourteen specialized scientists (*) from various parts of the world assembled to examine the problem of the consequences of the use of nuclear weapons on the survival and health of humanity.

Although most of these consequences would appear obvious, it seems that they are not adequately appreciated. The conditions of life following a nuclear attack would be so severe that the only hope for humanity is prevention of any form of nuclear war. Universal dissemination and acceptance of this knowledge would make it apparent that nuclear weapons must not be used at all in warfare and that their number should be progressively reduced in a balanced way.

The above-mentioned group discussed and unanimously approved a number of fundamental points, which have been further developed in the following statement.

Recent talks about winning or even surviving a nuclear war must reflect a failure to appreciate a medical reality: any nuclear war would inevitably cause death, disease and suffering of pandemic proportions and without the possibility of effective medical intervention. That reality leads to the same conclusion physicians have reached for life-threatening epidemics throughout history: prevention is essential for control.

In contrast to widespread belief, much is known about the catastrophe that would follow the use of nuclear weapons. Much is known too about the limitations of medical assistance. If this knowledge is presented to people and their leaders everywhere, it might help interrupt the nuclear arms race. This in turn would help prevent what could be the last epidemic our civilization will know

The devastation wrought by an atomic weapon on Hiroshima and Nagasaki provides direct evidence of the consequences of nuclear warfare, but there are many theoretical appraisals on which we may also draw. Two years ago, an assessment undertaken by a responsible official agency described the effect of nuclear attacks on cities of about 2 million inhabitants. If a one-million ton nuclear weapon (the Hiroshima bomb approximated 15,000 tons of explosive power) exploded in the central area of such cities, it would result, as calculated, in 180 square Km. of property destruction, 250,000 fatalities and 500,000 severely injured. These would include blast injuries, such as fractures and severe lacerations of soft tissues, thermal injuries, such as surface burns, retinal burns and respiratory tract damage and radiation injuries, both acute radiation syndrome and delayed effects.

Even under optimal conditions, care of such casualties would present medical task of unimaginable magnitude. The study projected that if 18,000 hospital beds were available in and around one of these cities, no more than 5,000 would remain relatively undamaged. These would accommodate only 1% of the human beings injured, but it must be stressed that in any case no one could deliver the medical service required by even a few of the severely burned, the crushed and the radiated victims.

The hopelessness of the medical task is readily apparent if we consider what is required for the care of the severely injured patients. We shall cite one case history, that of a severely burned twenty year old man who was taken to the burn unit of a Boston Hospital after an automobile accident in which the gasoline tank exploded. During his hospitalization he received 140 litres of fresh-frozen plasma, 147 litres of fresh-frozen red blood cells, 180 millilitres of platelets and 180 millilitres of albumin. He underwent six operative procedures during which wounds involving 85% of his body surface were closed with various types of grafts, including artificial skin. Throughout his hospitalization, he required mechanical ventilation. Despite these and many other heroic measures, which stretched the resources of one of the world's most comprehensive institutions, he died on his 33rd hospital day. His injuries were likened by the doctor who supervised his care, to those described for many of the victims of Hiroshima. Had twenty score of such patients been

presented at the same time to all of Boston hospitals the medical capabilities of the city would have been overwhelmed. Now, consider the situation if, along with injuries to many thousands of people, most of the medical emergency facilities had been destroyed.

A Japanese physician, Professor M. Ichimaru, published an eyewitness account of the effects of the Nagasaki bomb. He reported: "I tried to go to my medical school in Urakami which was 500 meters from the hypocenter. I met many people coming back from Urakami. Their clothes were in rags and shreds of skin hung from their bodies. They looked like ghosts with vacant stares. The next day I was able to enter Urakami on foot and all that I knew had disappeared. Only the concrete and iron skeletons of the buildings remained. There were dead bodies everywhere. On each street corner, we had tubs of water used for putting out fires after air raids. In one of these small tubs, scarcely large enough for one person, was the body of a desperate man who sought cool water. There was foam coming from his mouth, but he was not alive. I cannot get rid of the sounds of the crying women in the destroyed fields. As I got nearer to the school there were black, charred bodies with the white edges of bones showing in the arms and legs. When I arrived some were still alive. They were unable to move their bodies. The strongest were so weak that they were slumped over on the ground. I talked with them and they thought that they would be O.K. but all of them would eventually die within two weeks. I cannot forget the way their eyes looked at me and their voices spoke to me forever..."

It should be noted that the bomb dropped on Nagasaki had a power of about 20,000 tons of TNT, not much larger than the so-called "tactical bombs" designed for battlefield use.

But even these grim pictures are inadequate to describe the human disaster that would result from an attack on a country by today's stockpiles of nuclear weapons, which contain thousands of bombs with the force of one-million tons of TNT or greater.

The suffering of the surviving population would be without parallel. There would be complete interruption of communications, of food supplies and of water. Help would be given only at the risk of mortal danger from radiation for those venturing outside of buildings in the first days. The social disruption following such an attack would be unimaginable.

The exposure to large doses of radiation would lower immunity to bacteria and viruses and could, therefore, open the way for widespread infection. Radiation would cause irreversible brain damage and mental deficiency in many of the exposed in utero. It would greatly increase the incidence of many forms of cancer in survivors. Genetic damage would be passed on to future generations, should there be any.

In addition, large areas of soil and forests as well as livestock, would be contaminated reducing food resources. Many other harmful biological and even geophysical effects would be likely, but we do not have enough knowledge to predict with confidence what they would be.

Even a nuclear attack directed only at military facilities would be devastating to the country as a whole. This is because military facilities are widespread rather than concentrated at only a few points. Thus, many nuclear weapons would be exploded. Furthermore, the spread of radiation due to the natural winds and atmospheric mixing would kill vast numbers of people and contaminate large areas. The medical facilities of any nation would be inadequate to care for the survivors. An objective examination of the medical situation that would follow nuclear war leads to but one conclusion: prevention is our only recourse.

The consequences of nuclear war are not, of course, only medical in nature. But those that are compel us to pay heed to the inescapable lesson of contemporary medicine: where treatment of a given disease is ineffective or where costs are insupportable, attention must be turned to prevention. Both conditions apply to the effects of nuclear war. Treatment would be virtually impossible and the costs would be staggering. Can any stronger argument be marshalled for a preventive strategy?

Prevention of any disease requires an effective prescription. We recognize that such a prescription must both prevent nuclear war and safeguard security. Our knowledge and credentials as scientists and physicians do not, of course, permit us to discuss security issues with expertise. However, if political and military leaders have based their strategic planning on mistaken assumptions concerning medical aspects of a nuclear war, we feel that we do have a responsibility. We must inform them and people everywhere of the full-blown clinical picture that would follow a nuclear attack and of the impotence of the medical community to offer meaningful response. If we remain silent, we risk betraying ourselves and our civilization.

**Paths to Peace: A Contribution. Documents of the Holy See to the International Community* (New York, Permanent Observer Mission of the Holy See to the United Nations, 1987) pp. 185-186.