

# UNIT 32 PROBLEMS OF PEACE IN A NUCLEAR WORLD

## Structured

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## 32.0 OBJECTIVES

In this Unit, we describe the importance of peace in a world that is characterised by a proliferation of nuclear weapons endangering development. After you go through this unit, you should be able to:

- point out the dangers of the existing nuclear arsenals
- estimate the extent of damage that could result after a nuclear war
- explain the influence of the nuclear weapons powers on world military order
- appreciate the importance of agreements on disarmament and
- describe the significance of the steps taken by the UN and other non-governmental agencies in building up a global movement for international peace and security.

## 32.1 INTRODUCTION

The world we presently live in is a society threatened by the presence of nuclear weapons. There is a constant fear that uncontrolled use of this power could prove fatal to the very survival of life on earth. The destruction and havoc caused by the bombing of Hiroshima and Nagasaki by the US are sufficient to convince any one that using these dangerous weapons once again would only end up in the destruction of the entire human civilisation. Hence, the importance of strengthening or building up of the Peace Movement. Also, a great deal of importance should be attached to the inter-governmental agreements among nuclear weapon states on limiting of nuclear and conventional armaments, as a first step towards complete nuclear disarmament and establishing international peace and security.

But before we go into these aspects, let us have an idea of the very nature of nuclear weapons.

## 32.2 THE NATURE OF NUCLEAR WEAPONS

The first experimental nuclear explosion took place in the State of New Mexico in the US on 16th July 1945. It gave to the world a terrible weapon which has been known as the 'Universal Death Machine' or 'Doomsday Machine'. The first explosion produced a gigantic mushroom-shaped cloud of fire which went up to 40,000 feet in the sky. This has come to be known as the 'Nuclear Mushroom' or the 'Mushroom Cloud'.



1. Atom cloud bursting over Hiroshima (8.17 A.M., 6 August 1945 - 2 minutes after explosion).

Three weeks after this explosion, atom bombs were dropped on the cities of Hiroshima and Nagasaki in Japan. This was done to force Japan to surrender and, thus, end World War II



## 2. 10 August 1945: The ruins of Nagasaki (The day after the Atom bomb fell)

The nine thousand pounds heavy uranium bomb, which was detonated 1,890 feet above Hiroshima, produced a gigantic and glowing fireball half a mile in diameter. The temperature at its core was 50 million degrees Fahrenheit.

It is hardly surprising that an explosion of this kind would do a number of things which no other explosion in the entire history of warfare had ever done before. Among these, the most obvious is the sheer amount of sudden destruction which it produced. Even so, no one knows or ever will, as to how many people were actually killed or are still slowly dying by the bomb that was dropped on Hiroshima just over four decades ago. Indeed, the estimates vary from less than 70,000 to around 250,000; and the local authorities of the city of Hiroshima put the figure at 200,000. Nagasaki also was drowned in sudden death and destruction on a vast scale; 75,000 killed and an equal number wounded. However, because of its hills, the damage was confined to its northern part where the bomb exploded. Even so, of its 55,000 buildings, 20,000 were demolished altogether. (See illustration 3). In addition, the explosions released massive amounts of radioactivity which I know to be a source of a variety of cancers and these in turn, would continue to kill over the years slowly and painfully. That is why those who died immediately are generally considered to have been far more lucky than the 'survivors' of the explosions who had to suffer incurable illnesses for various periods of time.

The above description is meant to give only a broad nature of nuclear weapons and of the kind of destruction that even a few of them might cause. The picture is grim enough; and what these bombs did to Hiroshima and Nagasaki ought to have stopped any nation from producing ever increasing stocks of them. But it did not. A few years after the United States used the nuclear weapons,

Soviet Union became a nuclear power. Britain, China and France subsequently joined the nuclear club. The nuclear stocks of these great powers have continued to expand. These nations have succeeded in the past four decades in producing nuclear bombs of vastly greater destructive power, hydrogen bombs, neutron bombs, etc. There are about 50,000 nuclear weapons in existence the world today and some of them have a destructive power equal to 20 million tons of TNT each. The explosive power of a large hydrogen bomb in existence today is almost 1700 times the power of the Hiroshima bomb.



3(a) Two brothers who survived the Nagasaki Bomb (10 August 1945)



3(b) Mother and Child - Struggle to go on living (2.30) P.M., 10 August 1945



3(c) Survivors of the Hiroshima bomb (12 August 1945)

### **32.2.1 Consequences of a Nuclear War**

Since 1945 when the US developed the atom many other nations have acquired the know-how to produce the bomb. However, only four other nations developed the nuclear bomb. All the big powers, who incidentally are the permanent members of the UN Security Council, have stockpiles of them. In addition many smaller powers too are suspected to have produced their own bombs. The nuclear weapons known to exist today have a total blast power of 20,000 million tons of TNT. This is more than 1600 million times the blast power of the bomb dropped on Hiroshima.

All this would be enough to blow up the world, many, many times over. Indeed, even a small fraction of the nuclear blast power now available would be enough to destroy the Earth. In order to be able to see that this in fact, would be so, we would do well to make a distinction between the direct and the indirect consequences of a nuclear war. About twenty-five years ago, President Kennedy drew attention to the possibility that a full-scale nuclear war between the superpowers could wipe out more than 300 million Americans, Europeans and Russians in less than one hour. Over the years the nuclear weapons have continued to become far more numerous and deadly. Besides, the vehicles which would carry them are now much faster and more accurate than the earlier models. This means that many more people than 300 million could be expected to be killed within the first hour of the war. But, obviously, no precise figure can be given. Nor does it matter. For what matters most is the totality of chaos and destruction which a nuclear war will bring about. Indeed, it can only be misleading to try to make a process of another and far more widespread destruction will start. This means that those who die after the war is over, could well be far more numerous than those who die while it is still on. Besides, many more people can be

expected to die in, say, India or China taken separately than in the United States and the Soviet Union taken together. This is so because India and China are more heavily populated than either of the two superpowers.

### 32.2.2 The Nuclear Winter and its Effects

Therefore, it is extremely important to take the indirect consequences of a nuclear war also into account. In order to see what kind of consequences they could be, let us try to understand the nature of what is called the 'Nuclear Winter'. It gets its name from the very distinct possibility that soon after the nuclear war, temperatures over many parts of the globe and probably over the whole of it, will fall much below the freezing point. Why such a thing would happen is easy to foresee. With thousands of nuclear bombs exploding, thousands o millions of tons of dust and soot will be thrown several miles up into the atmosphere. These gigantic clouds of dust and smoke will soon cover very large parts of the globe and perhaps the whole of it. They will, thus, necessarily cut off most of the daylight from the Earth for several months. As a result, very sharp reductions in temperatures will take place even during summer - that is, if the war takes place during summer. In fact, any season during which it takes place would become one deep-frozen and freezing winter lasting for several months. But this also means that for the duration of this man-made 'winter', the normal cycle of day and night would be replaced by one long and unending night. Indeed, as a leading German scientist, Paul Crutzen, has said: 'When the nuclear exchange ends, the sun will be hidden behind black clouds several kilometers thick, and darkness and cold will descend upon the Earth for many months. All rivers and other bodies of water will freeze over due to **Nuclear glaciation** , and animals and standing crops will perish. No one will survive through the long, icy night.'

This will be followed by a new danger. For the **ozone layer** which now gives protection to various life forms on the Earth will have been largely burnt out during the nuclear war. This means that when the clouds of dust and soot settle down, whoever or whatever is still alive will be exposed to the **ultraviolet** radiation of the sun. This is a very serious hazard. For this kind of unfiltered sunlight can cause skin cancer and blindness, too.

Something like a mere one-fourth of the total nuclear blast power now available will be enough to cause such devastation on a global scale. In fact, just one of the parties involved will be enough to complete the job. For even if the side which is attacked does not hit back, the radio-active clouds caused by the bombs of the attacking side alone will soon cover the entire globe and create the conditions which have been described here. In this situation. It will be pointless to make any distinction between the victorious and the defeated. Indeed, all will have been defeated. It is difficult to imagine how anyone will be able to live through this war. But even if some scattered bands and groups of individuals do manage to do so somehow, they will not make any kind of organised society. Total anarchy and chaos will prevail. And yet all this need not happen.

### 32.2.3 Nuclear Proliferation and Overkill

By now, it should be clear that nuclear weapons do not and cannot possibly have any reasonable military role to play. They destroy everything and kill everything. In fact, they have been designated as 'omnicides' which means 'All-killers'. We may, therefore, designate them as 'kill-all'. For, those who fire the weapons at others, cannot themselves escape being destroyed by them. This mean that no military planner can afford to fire these weapons irrespective of the size of their stocks.

One step which was taken in 1968 to control and reduce the possibility of a nuclear war was to offer a Nuclear Non-Proliferation Treaty (NPT). This treaty which was sponsored by the USA, USSR and Britain, forbids the signatory nations from manufacturing nuclear weapons or carrying on nuclear tests. In exchange they are offered protection from a nuclear attack. Limiting the nuclear weapons owning nations, it is hoped, would reduce the chance of a nuclear war.

Strictly speaking, it is the continuous expansion of the nuclear arsenals of the superpowers in particular which should be described as 'Nuclear Proliferation'. For 'proliferation' literally means 'abundant Reproduction'. This only means that no treaty intended to prevent nuclear proliferation can possibly mean anything, unless it seeks to stop the major nuclear powers from continuing to acquire ever more of them. However, it is strange that the one non-proliferation treaty which exists in the world today is meant only to stop non-nuclear powers from acquiring nuclear weapons. This is certainly a laudable objective of the 'NPT'. But without controlling the nuclear hunger of the major powers at the same time, it would be pointless. For, it is the nuclear programmes of these major powers which create conditions for the proliferation of a nuclear weapons. The exclusive concern with what is called '**Horizontal Proliferation**' and a total neglect of what is called '**Vertical proliferation**' should be impossible to justify.

Given such standards of international political morality, it is hardly surprising that the sponsors of the non-proliferation treaty could not persuade a single country which had a clear nuclear potential to agree not to produce nuclear weapons. For example, both India and Pakistan happen to have the necessary technical and material resources available. And neither has agreed to sign the treaty. India has strongly opposed it on the ground that while it does seek to stop the spread of nuclear weapons to the non-nuclear states, it does not even try to prevent the nuclear states from acquiring ever more of them.

Since the signing of the NPT, a few nations emerged as nuclear capable states but none of them became nuclear powers. On the other hand, there was a manifold increase or proliferation of nuclear weapons by the sponsors of the treaty. The two superpowers and the other three nuclear states conducted several hundred nuclear tests to develop qualitatively improved nuclear warheads. As a result, by the end of the 80's, United States had stockpiled 23,400 warheads and the Soviet Union 35,000 warheads. Their ability to destroy the total world population many times over is generally referred to as the 'Nuclear Overkill'.

## Check Your Progress 1

- Note: i) Use the space given below for your answers.  
ii) Check your answer with the model answers given at the end of this unit.

1) The cities destroyed in World War II by the atom bomb are:

- a) .....  
b) .....

2) What are the effects of nuclear bombing?

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3) Define what is meant by Vertical Proliferation.

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**32.3 SUPER POWERS AND THE WORLD  
MILITARY ORDER**

The nature of nuclear weapons also determined the behaviour of superpowers and, therefore, the world military order. In the immediate years after the war, the United States and the soviet Union, which emerged as superpowers were locked in a political and ideological conflict. As leaders of the capitalist and communist forces, they sought to extend their influence on other countries through every means available. Although the Cold War conflict between the superpowers never became a military conflict, it led to an unprecedented race for arms. Both the US and the Soviet Union, sought to ensure their security through a balance of terror. That is, each of them tried to have nuclear weapons sufficient to destroy the other, even if it **happen to be attacked** first. This meant that each of the superpowers sought to deter a nuclear attack by (1) building a nuclear retaliatory force that could not be destroyed by an enemy's first strike, and (2) credibly promising that a first strike would be followed by a nuclear retaliatory counter attack surpassing in horror and loss and any possible gain anticipated by the initiator. This is known as the 'Second Strike Capacity'. This implies two things.

Firstly, to achieve this each must produce more and more sophisticated weapons. Bombs which are more deadly, that is, having greater power of destruction have to be produced. They should be capable of hitting precise targets. When one power does this, it has to be matched by the other. Therefore, both the superpowers conduct several hundreds of underground nuclear tests.

Secondly, having produced such nuclear weapons they must be located at a place which will not be accessible to the other. Hence, nuclear weapons they must be located at a place which will not be accessible to the other. Hence, nuclear weapons are located underground or are carried by moving submarines or bombers. The weapons can be launched by just pushing a button. Yet, both the powers assure the world that the nuclear war will not start by accident. All this is to deter the rival from using the nuclear weapons first. The system, therefore, ensures Mutually Assured Destruction or MAD for short.

Since the World war II the US, USSR and their allies among the industrialised world account for most of the military hardware production and export of arms. Most of the developing countries which attained independence in the years after World War II began to emulate the major powers in their search for security. Today, almost every developing country spends money on military hardware and on maintaining a military establishment. Having a military force has become an index of attainment of sovereign status.

Rivalries rooted in history, boundary disputes, ethnic conflicts have also contributed to tensions in the Third World. Principally, Third world is the scene of armed conflicts since World War II. All these are fought with imported weapons. Rivalries between Third World countries have led to



arms race among them. For example, between India and Pakistan, Iran and Iraq, Israel and the Arabs, Thailand and Kampuchea, etc. The big powers fed this not only by export of weapons but also by direct or indirect military support. Thus, both US and the Soviet Union built an intricate chain of military bases, listing posts or defence alliances in this area. This has produced a complicated set of patron-client relationship in international relations. Due to the development and induction of sophisticated arms, the militarisation of society began to gather momentum. The activities of medium and small states came to be based on military order. In this sense, superpower arms race became a worldwide phenomenon.

This military order which had taken shape during a period of four decades since the Second World War is now set to change. The Cold War conflict between the superpowers ended in the early 1990s with the collapse of Soviet Union. Global environment became favourable for nuclear restraint and disarmament. The legitimacy of the doctrines for the actual or deterrent use of nuclear weapons has eroded. In 1992, the United States and Russia agreed to a substantial reduction of their nuclear stockpiles under the Second Arms Reduction Treaty.

Despite these reductions, a substantial stockpile of nuclear bombs remain in the arsenals of the United States and Russia. The stockpiles of other nuclear powers, although small remain unaffected. The nuclear powers feel that the bombs provide unique security benefits and, therefore, intend to keep them. In this context, the Comprehensive Test Ban Treaty (CTBT) which was approved in 1996 and the proposed Fissile Material Cut Off Treaty (FMCT) seek to limit the addition of new bombs by banning testing of nuclear explosions and accumulation of fissile material used in making bombs. But they do not address the problem of eliminating the existing stockpiles. It is estimated that the present stockpile of nuclear weapons would last for another 50 years even without the addition of a single new bomb. These treaties, therefore, appear to freeze the nuclear status quo or legitimise the nuclear weapons of the big powers while putting constraints on the development of nuclear weapons by nations. As long as nuclear states rely on nuclear arsenals for their security, there is always the danger of proliferation. India has, therefore, rejected the Comprehensive Test Ban Treaty (CTBT) on the grounds that it is discriminatory. It perpetuates the hegemony of the nuclear powers and does not address the security concerns of non-nuclear nations.

## **32.4 PEACE MOVEMENT AND INTERNATIONAL SECURITY**

As a reaction to the dangers of nuclear armament to the environment from industrial growth, and grave social and economic problems in the developed countries, a significant awareness among the people about peace is growing. This has found its expression in peace movements which have taken different forms in different countries.

### **32.4.1 Peace Movement in the West**

Several important studies and books published in the 1970s first voiced these concerns. The Club of Rome's **Limits to Growth**, the British **Blueprint for Survival** and E.F. Schumacher's **Small is Beautiful** can be mentioned as some of these. But even before these, the Campaign for Nuclear Disarmament (CND) founded in the early 1960s by a group around Bertrand Russell had shown the way. However, the scope of the peace movements of the 1970s is much wider.

The peace movement, also sometimes called the 'Green Movement', Principally focuses attention on four themes : ecology, special responsibility, grass-root democracy and non-violence.

Unrestrained industrial growth has led to industrial pollution, depletion of natural resources, destruction of biosphere and unequal distribution of wealth. Acid rain, destroying of trees, poisoning of river and sea waters and pollution of atmosphere are some of the examples of ecological hazards. In this, an important role is played by multinational corporations. Maximising profits, to the exclusion of other considerations, becomes the only goal of these corporate sectors. They enjoy vast resources, sometimes greater than that of a small nation and are spread across national boundaries. The Bhopal Gas Tragedy in which thousands died from an 'accident' in the Union Carbide factory at Bhopal is a vivid example of this. The Greens, or the peace movement, therefore, seeks to redefine development, not equating it with economic growth, Non-exploitative and self sufficient economies are suggested as alternative models of development.

Achieving peace through security and security through armaments, still continues to rule the minds of national politicians. The peace movements emphasises global security and peace through citizens movements like the 'Amnesty International' or 'Campaign for Nuclear Disarmament'. Non-violence, freedom from military blocs and friendship between people and ethnic groups hold the promise of a true peace rather than security based on military establishments. The peace movements, therefore, favour nuclear disarmament and oppose nuclear power plants as source of energy. They support the concept of non-violent resistance.

The peace movements also support the rights of women and the cause of social justice. In international sphere, they support the developing countries in their attempts to bring about a new international economic order aimed at reducing the disparities among nations.

## **32.4.2 Gandhiji's View on War**

In many ways, Gandhiji had voiced similar views in 1920s and early 1930s. He rejected violence as a means to peace and advocated 'Satyagraha' or civil resistance. He argued, "I see bravery in neither destroying life or property, for offence or defence". He even called for unilateral disarmament.

For him, to be true to nature and to lie in harmony with it, was Non-Violence. His opposition to large scale industry and machines makes sense when viewed in this lights. He advocated decentralisation and wide autonomy to village communities. This would strengthen not only grass-root democracy but make for a better man. Thus, in many ways, the concerns of the peace movements reflect Gandhiji's views.

Gandhiji saw the futility of war and violence. He said that 'problems of war cannot be solved by developing the art of war but only by developing the art of peace'. However, he did not defend neutrality and thought it to be a moral right of a pacifist to decide which side is just in a military contest. What he deplored was the use of to decide which side is just in a military contest. What he deplored was the use of arms and violence. He was a war resister. He held that "war is wrong, is an unmitigated evil ... it has got to go ... freedom won through blood-shed or fraud is no freedom".

In place of war, Gandhiji advocated non-violent civil resistance - "The only antidote to armament which is the visible symbol of violence is Satyagraha - the visible symbol of non-violence." It is

possible that in such an effort, all resisters are killed but he believed that the aggressor will, in time, be mentally and even physically tired of killing non-violence resisters. He will try to discover the source of their strength of will and stop further killing.

## Check Your Progress 2

- Notes: i) Use the space given below for your answers.  
ii) Check your answer with the model answers given at the end of this unit.

1) What is India's stand on CTBT?

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2) Comment on Gandhiji's views on peace and non-violence.

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## 32.5 LET US SUM UP

The devastating nuclear explosion over Japan caused a human holocaust and served as an eye opener to the world, setting forth a continuous debate about the very usefulness of nuclear energy. It focused attention on a global scale on the future of nuclear power.

The possible consequences of any similar future nuclear explosion would be nightmarish to say the least, what with the advances in the nuclear weapon technology that has taken place in the last four decades. Some of the possible consequences of the unharnessed utilisation of nuclear power could be the onset of the nuclear winter - a condition indicated by the massive annihilation of life on Earth.

Notwithstanding such a probable disaster, the policy of nuclear proliferation followed by the major powers and their allies is bound to cause serious economic crisis even in their domestic affairs, such as unemployment and arbitrarily increasing the cost of goods and services. This would affect even those countries - the developing ones - which obsessed with the very security of their territories. Obviously, this would compel them to spend their scarce resources on military uses, with the diversion of resources from development of defence. Political instability is a possible outcome, which these countries can ill afford.

In recent years, however, the nuclear powers and the rest of the world have realised the futility of their mad rush to proliferate nuclear weapons. The UN has taken a lead in getting the nuclear weapon states to negotiate many agreements to reduce the nuclear arsenal, both on the earth as well as in space, oceans and underground. The emergence of global peace movements in various countries also played an important role in this regard. With the collapse of one of the superpowers, global environment has become more favourable for nuclear restraint had

disarmament. The focus of the peace movement should now be on creating a nuclear weapon free world.

## 32.6 KEY WORDS

**Freezing Point:** The temperature at which water converts itself into ice, normally 0°C.

**Militarism:** Pursuit of military ideals.

**Military Order:** Relating to the armed services; war-life matters.

**Nuclear Glaciation:** The tendency which, when misused, freezes earth's life and causes snow fall, annihilating life.

**Omnicide:** Murder or destruction of life, including plants and animals alike by nuclear weapons.

**Ozone:** Colourless gas with a Chlorine-like smell, formed from Oxygen.

**Ultraviolet radiation:** The part of the electro-magnetic spectrum with wavelengths shorter than light and longer than X-rays.

## 32.7 SOME USEFUL BOOKS

Barry Buzzan, 1983, **People, States and Fear: The National Security Problem in International Relations**, Harvester Press, Sussex.

Howe O' Connor, J., (ed.) 1984, **Armed Peace: The Search For World Security**, The Macmillan Press Ltd., London.

Pascolini, A. and Robert J., 1984, **The Arms Race At a Time of Decision**, The Macmillan Press Ltd., London.

T.T. Poulous, (ed.) 1988, **The Future of Arms Control**, ABC Pubs., New Delhi.

T.T. Poulouse, 1988, **United Nations and Nuclear Proliferation**, D.K. Pubs., New Delhi.

T.T. Poulouse, 1982, **Nuclear Proliferation and the United World**, ABC Pubs., New Delhi.

## 32.8 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

### Check Your Progress 1

- 1) a) Hiroshima  
b) Nagasaki

2) See Section 32.2.1

3) See Section 32.2.3

## **Check Your Progress 2**

1) See Section 32.3.1

2) See Section 32.4.2