

Nuclearization:-

Introduction;

Nuclear weapons pose an enormous threat to humanity. Since their first use, different leaders and organizations have been trying to prevent proliferation to additional countries. Despite their efforts, more states than ever before have obtained nuclear weapons. This timeline below explores some of the critical actions and decisions that led to today's distribution of those weapons and the world's non-proliferation regime.

History of Nuclear Weapons:

Nuclearization refers to the process by which a country or region develops, acquires or establishes nuclear capabilities.

1938-62 (The Nuclear Age Begins)

In the late 1930's, new scientific discoveries made nuclear weapons a possibility. During World War II, the United States and its allies were afraid that their enemies would control nuclear weapons first. Albert Einstein wrote a letter to President Franklin D. Roosevelt warning ^{not} the Germany might be working on a nuclear programme and urged the United States to start its own research

Date: _____

Day: _____

programme. The lecture was instrumental in convincing the U.S. government to take the potential threat seriously, leading to the establishment of the Advisory Committee on Uranium, which eventually evolved into the Manhattan Project.

• **Manhattan Project;**

As a result, they began to produce bombs under the Manhattan project, a secret research effort launched by the U.S. government in 1942. The success of the Manhattan project and the use of nuclear weapons against Japan ushered in the nuclear age.

In the aftermath of World War II, the growing tensions between the nuclear-armed United States and the Soviet Union during the **Cold War** made the threat of nuclear war a very real possibility.

• **Aug 6, 1945 — Aug 9, 1945**

First atomic bombs are dropped on Hiroshima and Nagasaki

In the fourth year of fighting Japan in World War II, the United States dropped the first atomic bomb used in combat on Hiroshima, Japan on August 6. This weapon killed more than one hundred thousand people. On August 9, the United States dropped a second bomb on Nagasaki.

The second attack killed more than seventy thousand people. Six days later, the emperor of Japan announced his country's surrender. They remain the only atomic bombs ever used in war.

• IAEA Creation:

The International Atomic Energy Agency, 1957 was created with the mission of promoting and overseeing the peaceful use of nuclear technology such as in power plants. President Dwight "Atoms for Peace" speech is considered the institution's origin. He said an international agency was needed to prevent the spread or proliferation of nuclear technology. Dwight warned that if unchecked, nuclear weapons could result in "the annihilation of the irreplaceable heritage of mankind."

• The Soviet Union's creation of the Atomic Bomb:

The USSR was aware of the Manhattan project through a network of spies within the U.S. On Aug 2, 1949, the Soviet Union launched its own first atomic bomb, code-named First lightning or RDS-1.

* Deterrence and the Cold War:
Mutually Assured Destruction (MAD);

The development of nuclear weapons by both the U.S and USSR led to the concept of Mutually Assured Destruction, where both sides possessed enough nuclear weapons to ensure that any nuclear conflict would lead to the total destruction of both the attacker and defender. This became the cornerstone of Cold War deterrence strategy.

* Nuclear proliferation, Global Spreads

Following the U.S and USSR, other nations began developing nuclear weapons, including the United Kingdom, France and China. This spread of nuclear weapons, known as nuclear proliferation, raised concerns about global security and the potential of nuclear war.

Non-Proliferation Treaty (NPT).

In 1968, The Nuclear Non-Proliferation Treaty was signed, with goal of preventing the spread of nuclear weapons, promoting disarmament, and facilitating the peaceful use of nuclear energy. The treaty created a framework to limit the number of nuclear armed states, though some nations, such as India, Pakistan, and Israel did not sign the treaty and developed nuclear weapons immediately.

Road to Nuclearization for Pakistan

Pakistan's acquisition of nuclear capabilities was driven by a combination of strategic, security, and geopolitical factors, particularly in response to regional rivalries and perceived threats. Here's a detailed look at how Pakistan developed its nuclear program and reasons behind it.

* Initial Steps towards Nuclearization.

Pakistan's interest in nuclear technology began soon after its independence in 1947.

* India's Nuclear Program and Regional Rivalry:

Pakistan's drive to develop nuclear weapons was largely in response to India's nuclear ambitions. In 1974, India conducted its first nuclear test, known as the "Smiling Buddha", which was described as a "peaceful nuclear explosion" but signaled India's entry into the nuclear club.

* Security Concerns:

The 1971 Indo-Pakistan war, which led to the creation of Bangladesh, was a significant blow to Pakistan.

↳ Lessons from the fall of Dhaka

1. Separatist movement of Bangladesh was provided legitimacy by Indian government by supporting, launching and giving weapons to them.

2. East Pakistan and West Pakistan's way of communication was India, Indian Army in East Paki they cut off main supply lines. Army in East Pakistan couldn't get supply lines and reinforcements so they failed.

3. Indians also landed troops in East Pakistan.

The Quest for Nuclear Weapons: Zulfiqar Ali Bhutto's Vision:

Prime Minister Zulfiqar Ali Bhutto was a key proponent of Pakistan's nuclear weapon programme. He famously said that;

"We (Pakistan) will eat grass, even go hungry, but we will get one of our own (atomic bomb)... we have no other choice."

Pakistan learned three lessons from this:

1. India won't stop undermining Pakistan's Nuclear security!

2. Self help

3. They can't find India unless they are strong

Kahuta Research Laboratories,

Pakistan, under the leadership of Dr. Abdul Qadeer Khan, established the Kahuta Research Laboratories.

Due to fear of sanctions, this programme was conducted with high degree of secrecy.

Nuclear Tests and Declaration:

India conducted a series of nuclear tests in May 1998, known as "Operation Shakti". In response to India's test Pakistan conducted its own nuclear tests known as "Chagai-I", which marked Pakistan's official entry into the nuclear-armed states club.

India's Plan to attack Kahuta Nuclear Reactor;

Indians planned to attack on Kahuta along with Israel, but this failed because of Iranian Revolution during which they found a document of Indian attack. Pakistan response was that if they attack us, we'd attack them back and our pilots would go into self-destruction mode. Due to this India cancelled the attack.

International Repercussions;

International government reacted to our Nuclear weapons with the debate that Pak should have prioritized socioeconomic development over military and nuclear capabilities. But if our survival had been at risk, how come our socio-economic conditions would have improved?

Nuclear Weapons: A threat to Humanity:

There are 14900 Nuclear weapons and still counting. They pose an existential threat to global peace and security and human survival.

Below is how,

1. **Unparalleled Destructive power:**
A single nuclear bomb can devastate an entire city, killing thousands of people.
2. **Nuclear Aspirant States:**
There are many states who want to acquire nuclear weapons like Iran, KSA and Israel etc. They would pose more existential threat.
3. **Non-signatory NWS continue to proliferate:**
There are 44 countries who haven't signed Comprehensive "Nuclear Ban Treaty" and continue to proliferate.
4. **Ongoing Rivalry among NWS:**
We see rivalry between US and China, China and India, Pakistan and India.
5. **The failure of Wae on Terror & its aftermath:**
Terrorism, Subgroups have increased and became more methodical and sophisticated. There are people working for them. If Nuclear entities fall into their hands it would be destructive.

Conclusion: While Nuclear weapons seem as a deterrent under the doctrine of MAD, their very existence increases global instability, the risk of proliferation.