Nuclear Weapons Tests and Its effects on the Environment

Elvis Salcedo
Prof:MacDonald
Environmental Economics
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What is a Nuclear Weapon ?

A nuclear weapon is an explosive device that derives its destructive force from nuclear reactions, either fission (fission bomb) or from a combination of fission and fusion reactions (thermonuclear bomb). A nuclear device no larger than traditional bombs and can devastate an entire city by blast, fire, and radiation.

A Nuclear Weapon

Nuclear bombs are lethal weapons that cause cataclysmic explosions when energy is released by the splitting of uranium or plutonium atoms in atomic bombs or the fusion of hydrogen atoms in hydrogen bombs. A detonated nuclear bomb produces a fireball, shockwaves and intense radiation. A mushroom cloud forms from vaporized debris and disperses radioactive particles that fall to earth contaminating air, soil, water and the food supply. When carried by wind currents, fallout can cause far-reaching environmental damage.

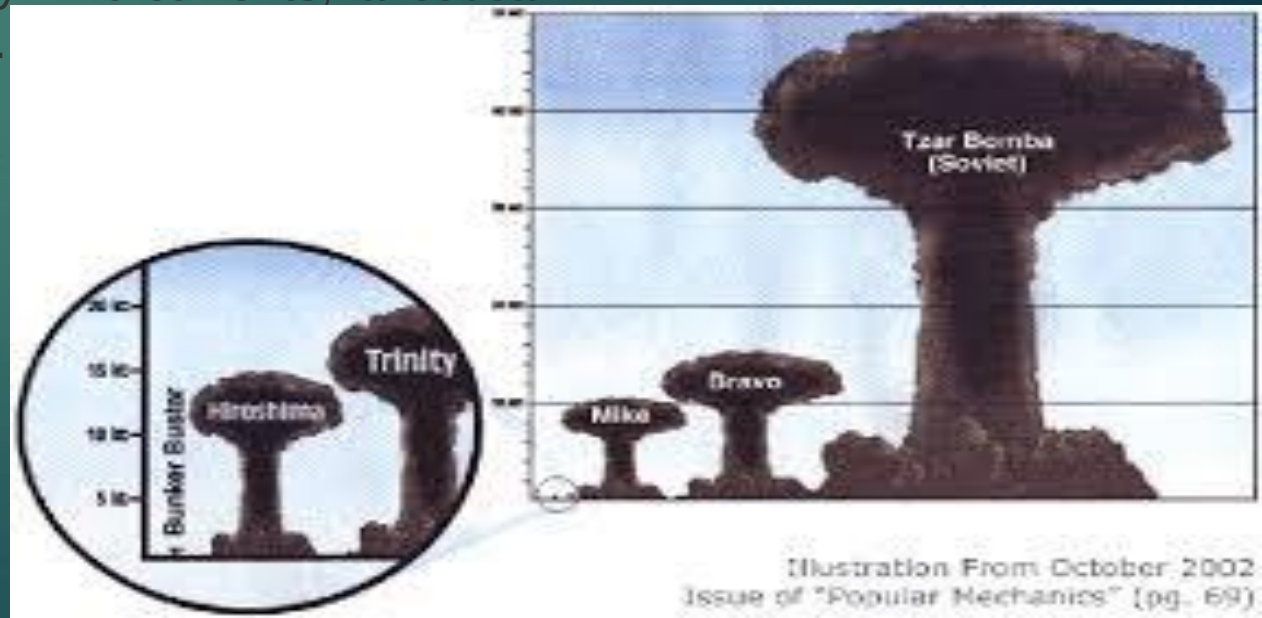
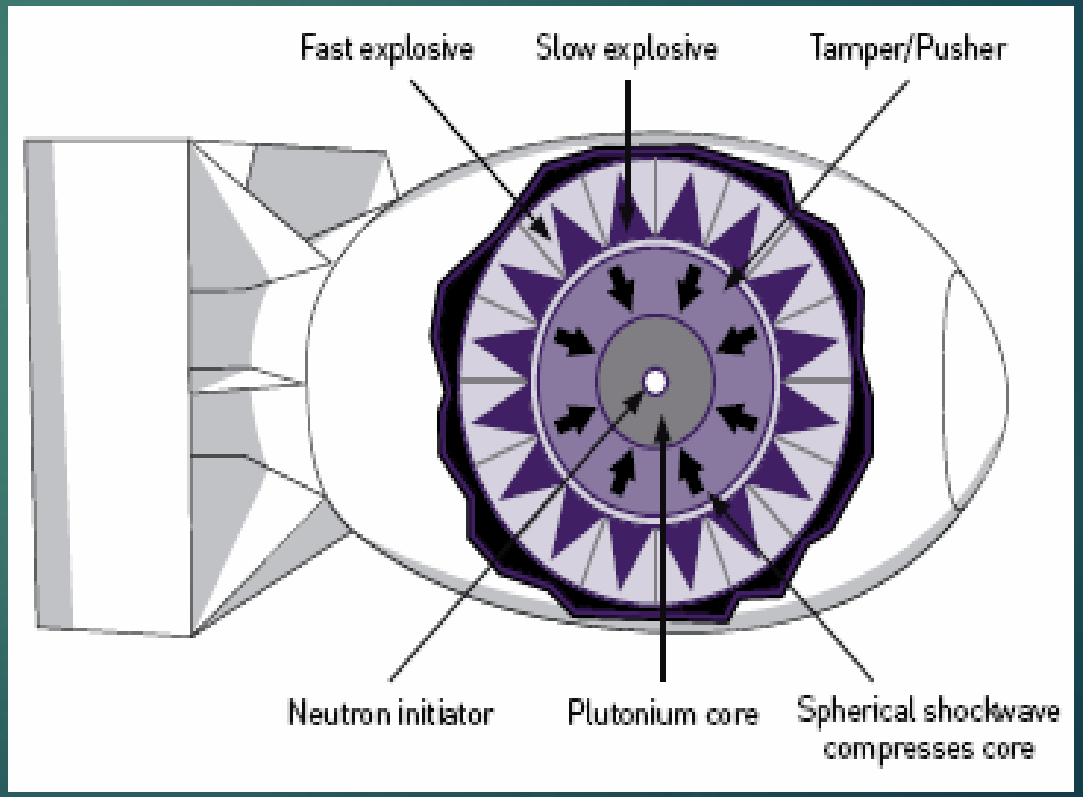


Illustration From October 2002
Issue of "Popular Mechanics" (pg. 69)

What a Nuclear Weapon looks like!

The first Nuclear device ever used aka "Little boy"

Basic understanding of a Nuclear Weapon



What happens after a Nuclear Weapon goes off?

- Direct effects

-1. Blast Damage

-2. Thermal Reactions

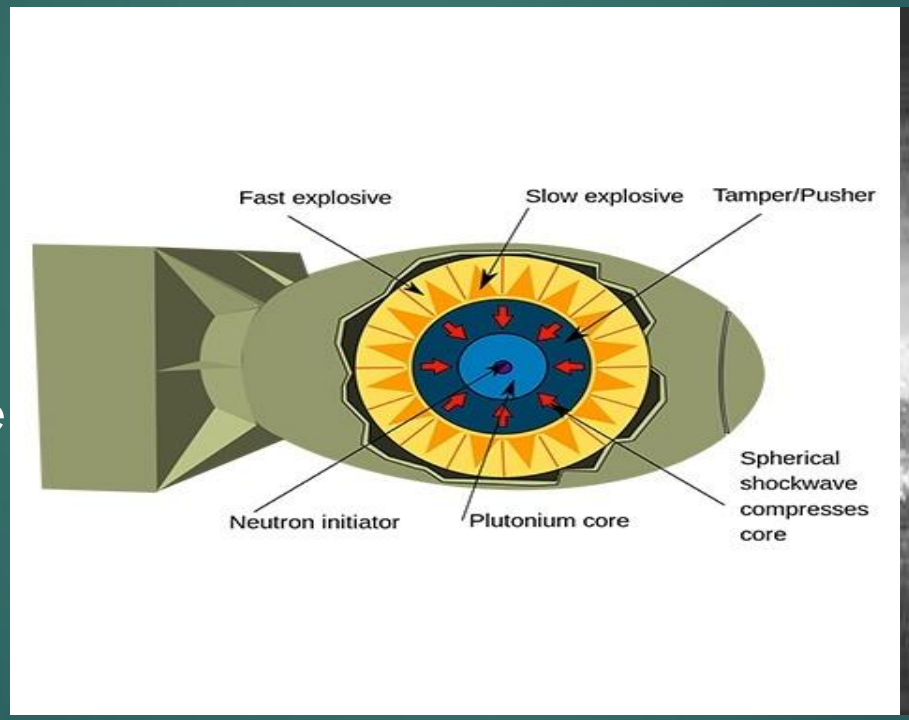
4 indirect effects

- 1.electromagnetic force

-2.Ionizing radiation

-3 Fallouts aka"dark rain"

-4. Earthquakes



Facts and Knowledge

- The Energy released from a detonated Nuclear Weapon categorizes as follows:
- Blast= 40 to 50% of total energy
- Thermal Reaction = 30 to 50% of total energy
- Ionizing Radiation = 5% of total energy
- Residual Radiation = 5 to 10 % of total energy
- A Nuclear Weapon Direct effect: Around 99% of the destruction caused by a Nuclear Weapon is due to the blast effects. The majority of buildings, houses will suffer critical damages.
- Nuclear Weapon Fallouts also known as “black rain” is the primary air contaminator.

Stages after a Nuclear Weapon Detonates

- Initial stage—the first 1–9 weeks, in which are the greatest number of deaths, with 90% due to thermal injury and/or blast effects and 10% due to super-lethal radiation exposure.
- Intermediate stage—from 10–12 weeks. The deaths in this period are from ionizing radiation in the median lethal range
- Late period—lasting from 13–20 weeks. This period has some improvement in survivors' condition.
- Delayed period—from 20+ weeks. Characterized by numerous complications, mostly related to healing of thermal and mechanical injuries, and if the individual was exposed to a few hundred to a thousand Millisieverts of radiation, it is coupled with infertility, sub-fertility and blood disorders. Furthermore, ionizing radiation above a dose of around 50-100 Millisieverts exposure has been shown to statistically begin increasing a person's chance of dying of cancer.

Why do Nations develop and build Nuclear Weapons?

- Nuclear Weapons are developed for National Security Defense System.
- Nuclear Weapons are developed to intimidate and build fears in other countries.
- Nuclear Weapons are devices of Massive Destruction(they are powerful)
- Its an statement of a Nation undergrowth Power and Development

The beginning of a Nuclear Era

- The first Nuclear Devices were use in 1945 during WWII by the United States.
- Knowing by "little boy" and "Fat Boy" Nuclear Bombs that were dropped in Hiroshima and Nagasaki(Japan) and both combined have more 400,000 deaths, Lands destruction and fear.
- More than 2,000 Nuclear Weapon Test have been conducted since the Era started. Hydrogen Bombs, Nuclear Bombs, Electromagnetic Bombs, Ballistic Missiles.

Test Sites

- In Test sites such as the Marshal islands &Bikini Atom were the United States have conducted a series of Nuclear Tests during the 1940s-50s till now they still feel the effects of Nuclear Radiation and Nuclear Fallouts effects and were told that the Island is not safe to live in due to the following effects:

-High level of radioactive particles

- Oceans and Rivers Contaminations

-Inability to grow crops

-floats

- Fish's, water and soil are infected with Radioactive Particles

Facts and Findings

- According to my sources: Testing and detonating around 50 to 100 bombs which is around the 0.03% of all Nuclear Arsenal in the world will have an unpredictable increase in C02 which will cause a series abnormal climatic changes ever faced in history.
- Global Temperatures would crash.
- There will be a decreased in growing crops all over the world.
- It is predicted that the ozone layer would be depleted 40% due to the excessive amount of CO2 and Nuclear fallouts that goes into our atmosphere and Environment.
- Extremely waste of Nuclear material which will contaminate Oceans, Rivers and will have an impact in food production.

Effects of Nuclear Weapon Components in human health.

- Radiation poisoning, also called “Radiation sickness" or a "creeping dose", is a form of damage to organ tissue due to excessive exposure to ionizing radiation. There are numerous lethal radiation syndromes, including prodromal syndrome, bone marrow death, central nervous system death and gastrointestinal death.
- Exposure to Radiation will cause birth defects and heritage issues due to the amount of modify cells.
- Hair loss
- Blood cell loss
- Will cause thyroid and leukemia cancer

Effects of Nuclear Testing on the Environment

- After Detonation Temperature Rises up to 10 Millions degrees Celsius
- The extreme heat of thermal radiation burns everything in its path, including animals, trees, buildings and people.
- Trees will take up to 1 year to recover
- Wind and water currents carry the dust across a much larger radius than the initial explosion, where it contaminates the ground, water supply and the food chain.
- Will cause deformities on offspring's
- Radioactive particles from nuclear fallout also can contaminate both wild and domesticated animals causing genetics effect, as well as agricultural plants
- Radioactive particles can travel from the site of an Nuclear Weapon explosion and contaminate bodies of water, including aquatic life like fish.

Should we be worried?

- Absolutely, as we all know Nukes are weapon of massive destruction
- Weapons that can be lethal and catastrophic
- Weapons that can wipe out the majority of the human race if a war breaks out
- As tech and science advances, the more powerful and stronger Nukes get.

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