

Humanitarian Impacts of Nuclear Weapons: regional and global risks, accidental, mistaken or intentional detonations

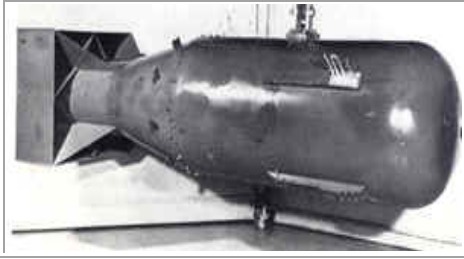


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Director, Acronym Institute for Disarmament Diplomacy
World Humanitarian Summit, Istanbul 24 May 2016



9 nuclear arsenals
>15,400 weapons
>2,000 Mt

**One small (under 13 kt)
nuclear bomb caused this...**





**Hiroshima in ruins,
August 1945**

CLIMATE RISKS

Recent studies show that a 'limited' nuclear war would cause abrupt climate freezing, rainfall disruption and agricultural collapse

“Nuclear famine” could kill billions of innocent civilians globally



**1-2 billion dead
from starvation**

*Dr Ira Helfand,
International Physicians
for the Prevention of Nuclear War*

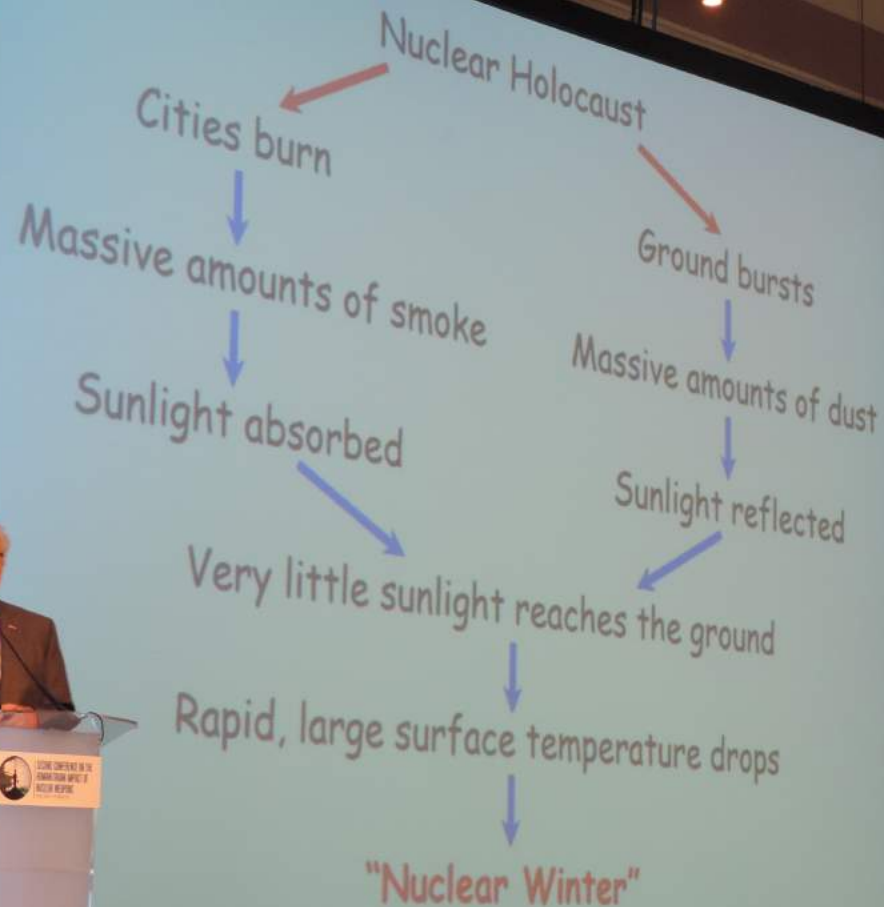


Useless for security, NW have serious humanitarian consequences

- > powerful blast, with buildings collapsing on people**
- > intense heat, causing uncontrollable fires**
- > radiation contamination and sickness**
- > radioactive dust clouds encircling the Earth**
- > abrupt temperature drop, darkened days, with prolonged freezing and climate disruption**
- collapse of food resources**
- > Global famine, social and economic breakdown, mass humanitarian suffering**

THE LIVING WOULD ENVY THE DEAD

Climate scientists report to HINW Nayarit on recent research on “nuclear winter”



ERS

Alon Robson
Department of Environmental Science

“Limited”, “regional” nuclear “exchange” would have Global Humanitarian Impacts

- > Research on effects of 100 ‘small’ nuclear explosions (15 kt, Hiroshima size) on urban centres: Up to 17 million immediate deaths
- > Lofting, circulation and persistence of smoke/dust clouds for ~ 10 years
- > Abrupt drop in temperatures, disruption of rainfall, agriculture failures all over the world
- > Substantial and long lasting climatic effects likely to cause widespread global famine

This is less than 1% of today’s nuclear arsenals – or half the explosive power carried on one Trident-armed submarine

- > **Massive dust clouds cause sudden cooling** - decreased sunlight, less rainfall shortens growing seasons; reduces crop yields
- > Stratospheric **ozone depletion** damages crops sensitive to UV-B
- > **Radioactive and toxic contamination** takes farmland out of production
- > **Disruption of trade and distribution systems** so food can't reach the hungry



SOCIAL and Development IMPACTS

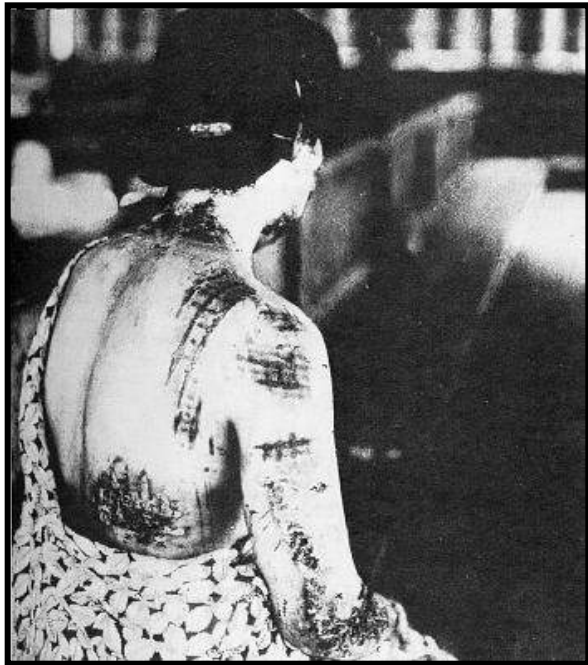
9 nuclear-armed countries with poverty, social, military and economic problems...

	2011 in \$ billions
US	61.3
Russia	14.9
UK	5.5
France	6.0
China	7.6
Israel	1.9
India	4.9
Pakistan	2.2
DPRK/ N. Korea	0.7
TOTALS	104.9



source: Global Zero 2012

Gender Impacts: disproportionate harm to women and children from nuclear radiation, genetic mutations, and social impacts of nuclear weapons policies



Even before the bomb drops - Development and education impacts

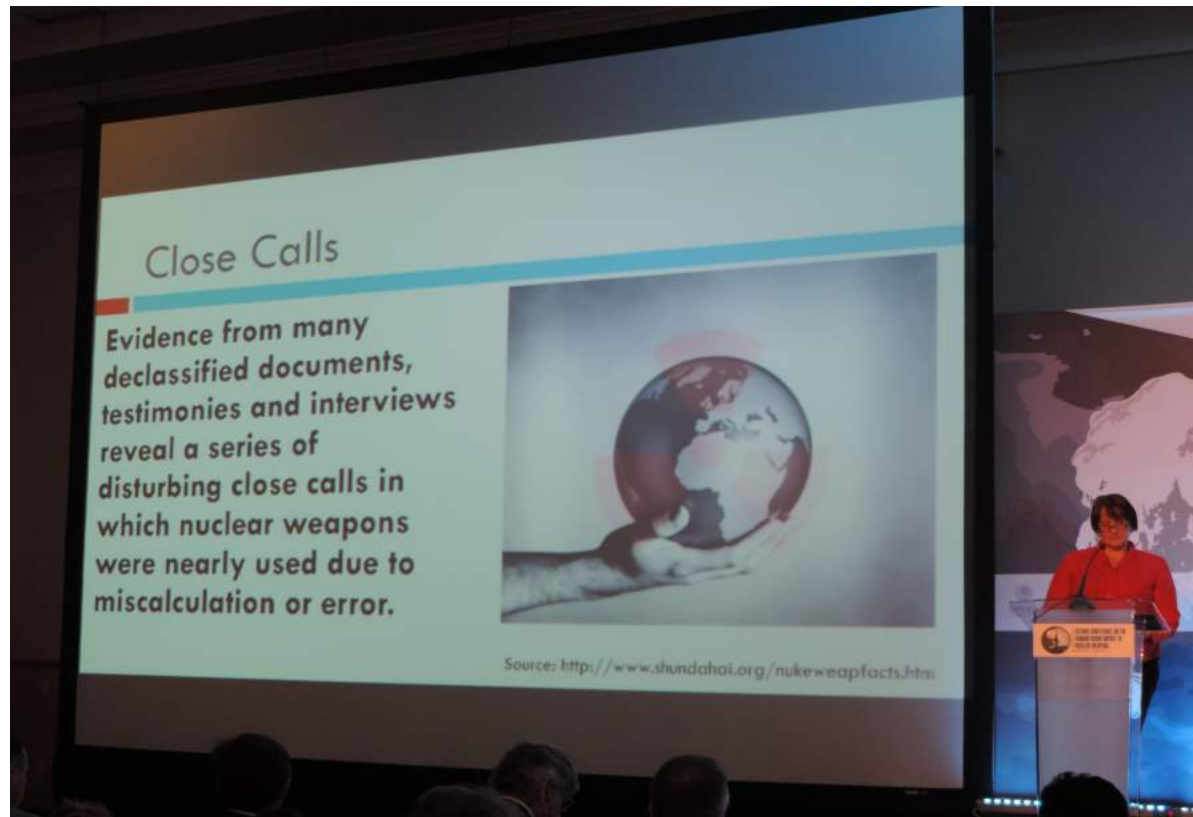


**But nuclear deterrence means that
nuclear weapons won't be detonated...
doesn't it?**



CLOSE CALLS, MISCALCULATION AND NEAR MISSES

“as long as nuclear weapons exist, the risk of an inadvertent, accidental or deliberate detonation remains...”



UK Royal Institute for International Affairs, Chatham House

Causes of Near Nuclear Misses 1962 - 2002

Miscommunication

Espionage

Faulty computer chip

Technical error

Exercise scenario tape causes nuclear alert

Conflict escalation and miscommunication

Misperception of military training exercise

Loss of command and control structures

Mistaken identity of research rocket launch



Recent revelations on nuclear deployment problems and mistakes

- Aug 2007 – six nuclear-armed cruise missiles flown across USA by a USAF B52 bomber, without authorization or (apparently) knowledge
- Feb 2009 – serious collision between French and UK nuclear-armed submarines (Vanguard and Triomphant)



- recent revelations about problems at L'Île Longue (homeport for French nuclear-armed subs)
- recent revelations about safety and security breaches involving UK nuclear submarine forces, and concerns raised 2012-13 by UK Defence National Regulator and Ministry of Defence

Terrorist risks and vulnerabilities - Nuclear warheads on trains, planes, boats and public roads



The examples are drawn from only limited information, mainly from Britain, France and US.

Less is known about other nuclear vulnerabilities, risks and problems, but that does not mean they are safe or secure – FAR FROM IT!

CONCLUSIONS:

Nuclear risks are high, global and life-threatening, a serious humanitarian issue “of the utmost importance to all peoples in the world...” whether armed or not.

