

Background for the NKS-B NUCSEM project

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Direktoratet for
strålevern og atomsikkerhet

Norwegian Radiation
and Nuclear Safety Authority

Trinity test, New Mexico 16 July 1945



Cold war 1945-1991

- Fear of use of nuclear weapons and nuclear war
- Preparations, emergency response planning, exercises etc.



Photo: Federal Government of the United States

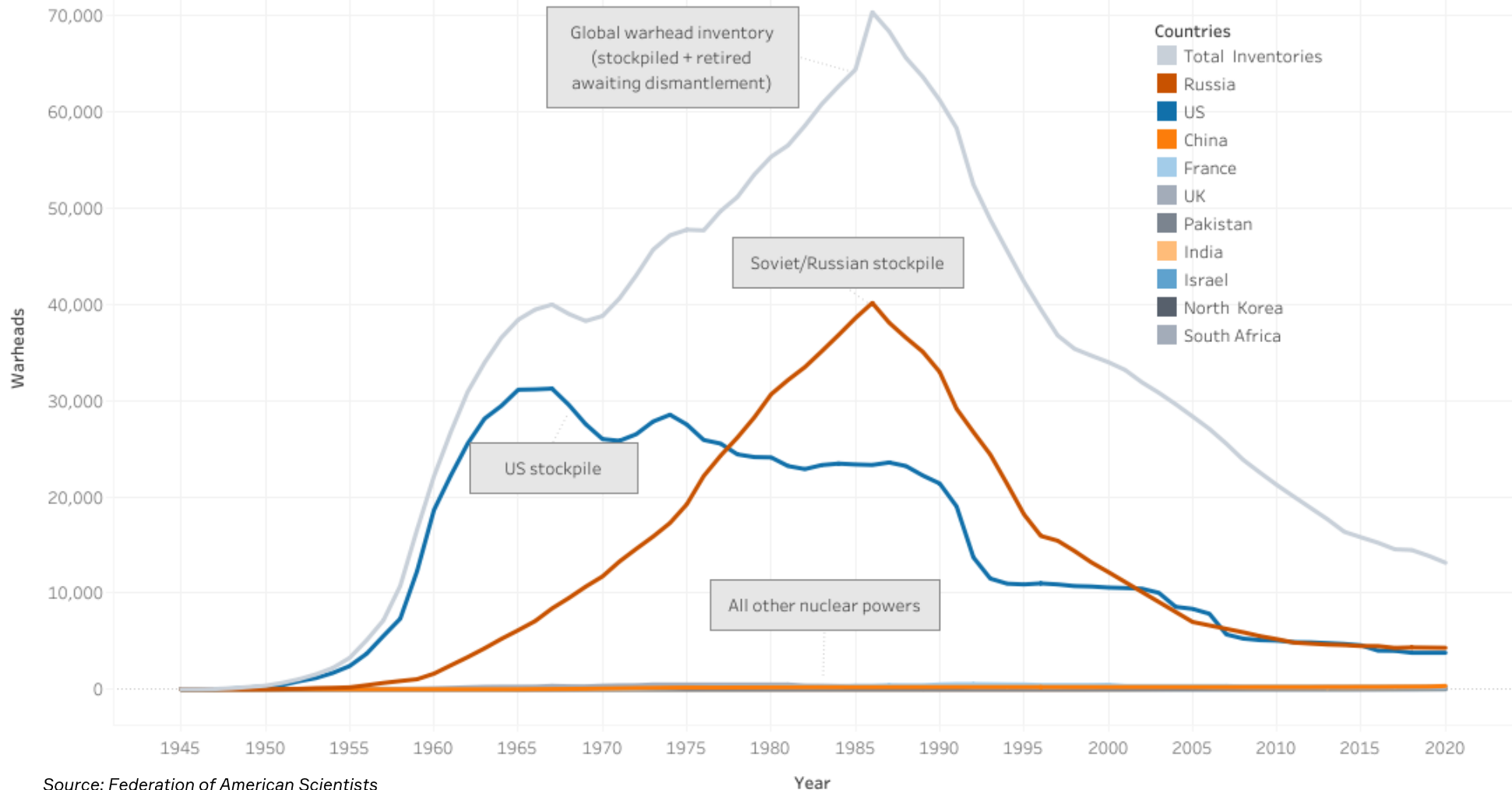
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Nuclear weapons stockpiles 1945-2021

Estimated Global Nuclear Warhead Inventories 1945 - 2021

Last updated: 2 August 2021

Hans M. Kristensen, Matt Korda, and Robert Norris, Federation of American Scientists, 2021



Softening and disarmament

Non-proliferation and disarmament high on the political agenda, but use of nuclear weapons towards a Nordic country was a more distant scenario in civilian emergency preparedness

E.g. Norway:

- Defence Study 2007: «*Low probability for existensial military challenges against Norway in the foreseeable future*»
- Use of nuclear weapons against Norwegian territory not emphasized in Norwegian civilian emergency preparedness
- More concerned about the risk for use of nuclear weapons abroad
- Some protective measures, i.e. use of fallout shelters, were removed from the list of relevant protective measures in the nuclear and radiological emergency organisation

«Humanitarian Impact of Nuclear Weapons» – three international conferences

- Oslo (Norway), March 2013
- Nayarit (Mexico), February 2014
- Wien (Austria), December 2014



Photo: Kilian Munch/Gyro

Non-proliferation treaty (NPT)
Review Conference in New York (USA), April/May 2015

Nobel's Peace Prize to ICAN (*International Campaign to Abolish Nuclear Weapons*) in 2017

Nuclear terrorism – use of nuclear weapons by non-state actors

- Increased concern internationally
- Emphasize on securing fissile material and technology



Photo: AP

Current development

- Withdrawal from international and bilateral agreements
- Nuclear weapons states wish to modernize existing arsenals, develop small nuclear weapons and maintain first strike options
- International security policies, colder relationship between NATO and Russia
- Development of new, radical weapon systems

New Russian development projects...

- Burevestnik (NATO: «Skyfall»)
 - Nuclear-powered cruise missile
 - Practically unlimited range
 - Highly maneuverable
- Poseidon (NATO: «Kanyon», former «Status-6»)
 - Nuclear-powered unmanned underwater drone
 - Nuclear warhead, intercontinental range



Photo: AP/Alexander Zemlianichenko

Newly published information on mishaps with nuclear weapons

- Books and reports, declassified documents
- Loss of command and control structures, technical errors and miscommunication

NKS-B NUCSEM as a Nordic project

Several Nordic countries have currently an interest in scenarios related to the use and detonation on nuclear weapons within their borders.

Project partners:

- Norwegian Radiation and Nuclear Safety Authority (DSA)
- Radiation and Nuclear Safety Authority of Finland (STUK)
- Danish Emergency Management Agency (DEMA)
- Icelandic Radiation Safety Authority (IRSA)

The NKS-B NUCSEM project is funded by Nordic nuclear safety research (NKS)



Purpose of the project

- Organising a seminar on the use of nuclear weapons towards a Nordic country in order to coordinate efforts, and exchange knowledge and views
- Build a Nordic network in this field

