

# [Nuclear against the kurdish population in iraq. in](https://assignbuster.com/nuclear-against-the-kurdish-population-in-iraq-in/)

Nuclear weapons In order to produce nuclear weapons (nuclear explosion weapons) it is necessary to have  plutonium or highly enriched (weapons-grade) uranium. These fissionable materials are not freely available on the international market. They can  only be produced through complicated separation processes, for example in a nuclear reactor or ultracentrifuge system. So if a country or organisation wishes to develop a nuclear weapons programme, it needs nuclear projects for the production of the required fissionable material.

Civilian nuclear projects, like nuclear energy projects, usually do not require  plutonium or highly enriched uranium.                      Radiological weapons In addition to nuclear explosive weapons, there is a second type of nuclear weapon: the radiation weapon or radiological weapon. This type of weapon disperses radiation or – by means of conventional explosives- radioactivematerial over a certain area (so- called  ‘ dirty bomb’). Radiation from such aweapon may kill immediately, but it can also have long-term effects the nature and/or scope of which are comparable tothose resulting from a nuclear reactor accident (the Chernobyl  effect). Plutonium or highly enriched uranium is not required for radiation weapons; in principle any radioactivematerial can  be used. Biological weapons There  are two types of biological weapons.

The first one consists of living micro organisms like viruses, bacteria and fungi that can cause diseaseanddeath, i. e. pathogens. The best-known examples are the anthrax bacterium and the smallpox virus. The second type are toxins produced by biological organisms, such as the well- known botulin, which is produced by the bacterium Clostridium botulinum (causing botulism in water). Dispersion of pathogens may lead to epidemics. During the Gulf War in 1990-1991, Iraq developed such agents, but did not deploy them. Even small- scale infections, such as caused by the anthrax letters in the United States in 2001-2002, may lead to panic  and social disruption.

Chemical weapons Chemical weapons have  a longer history. In World War I, for example, mustard gas was used, a blistering agent that can  be lethal or cause chronic lung problems. During and after World War II, nerve gases with a paralysing effect were developed. More recently, in the 1980s, Iraq deployed chemical weapons in its war with Iran andagainst the Kurdish population in Iraq. In order to develop chemical weapons it is necessary to have expert knowledge, raw material (also called precursors), corrosion- proof production equipment and safe laboratories and storage facilities. Apart from this, however, in general the production of chemical weapons is not very difficult. They have even been described as ‘ the poor man’s nuclear bomb’. Much knowledge and many  goods relating to chemical weapons can  be used for both civilian andmilitary purposes (dual-use goods and technology).

Chemical weapons are also attractive to terrorists. The best-known incident has so far been the nerve gas attack in the Tokyo underground by the Japanese Aum Shinrikyo sect in 1995.                    Means of delivery Countries producing weapons of mass destruction also try to procure and develop the means of delivery for these weapons, such as ballistic missiles, but also cruise missiles or unmanned aerial  vehicles (UAVs). Means of delivery are necessary todeploy  the weapons effectively.

The production of these means requires a technological level which has not yet been achieved by all countries of proliferation concern. Acause for concern, however, is the fact that some countries that do have this technologyhave  shown themselves prepared to sell it or to render technical assistance. For example, North Korea supplies missile technology to countries in the Middle East and to Pakistan. PROLIFERATION OF WMDs:  Weapons of mass destruction are back  in the news, raising fresh fears of proliferation and use. On April 2 North Korea announced its nuclear reactor would restart. Two weeks earlier the Syrian government and rebel forces accused each other  of discharging a deadly  chemical near the city of Aleppo, although what exactly happened remains murky.

The threat from nuclear, chemical and biological weapons hangs over the planet. Six conventions, two treaties, one protocol, one regime, one arrangement, one code, one initiative  and ten regional or zone  treaties have  been  instituted since 1925 to control these instruments of mass murder. Most of the accords require  only passiveagreement and are trumped by influence-peddling, profit-seeking and ideology-spreading considerations. As a result the danger of nuclear, chemical and biological agents passing to non-state actors is on the rise, too. Countries have spurred proliferation of every WMD category since the 1950s.

. Disseminating the weapons, relevant technologies and dual-use materials remains a sure fire way for not only rogue states and terrorist organizations but even superpowers to sway other  nations, make quick profits or destabilize foes. Not surprisingly, the United Nations Institute for Disarmament Research concluded: “ The non-proliferation treaties lack effective mechanisms to enforce compliance. The less formal  export  control regimes suffer from the same lack and have  limited membership.” Mustard gas was used extensively during World War I.

Negativepublic reaction led to the Geneva Protocol of 1925.  Yet Italy in 1936, Japan from 1937 to 1945, Egypt from 1963 to 1967 and Iraq in the 1980s all deployed chemicals against military and civilian targets. Owing to the transfer of materials and technologies, 23 countries stockpile or have chemical WMD capability: China, Egypt, India, Indonesia, Iran, Iraq, Israel, Japan, Kazakhstan, Libya, Myanmar, North Korea, Pakistan, Russia, Saudi Arabia, Serbia, South Africa, South Korea, Sudan, Syria, Taiwan, United States and Vietnam.