4. Biological pollution

The **presence of diseased** agents in water and/or exceeding the critical level is called biological pollution. Sewage wastes and hospital-based medical wastes mixed into bodies of water pose a serious risk in this contextThis can lead to outbreaks in areas where there is no treatment plant and there is no access to mains water (or in areas where well water is used).

Contaminants involved in water tend to accumulate within aquatic organisms. These substances can reach fish through the food chain, and from there they can reach people through the aquaculture that is consumed

For example Legionnaires' disease is a serious form of pneumonia caused by Legionella pneumophilla and can lead to death. Legionella lives and reproduces in moist and watery environment. The most common route of transmission is plumbing and air conditioning in buildings. There is no evidence of human-to-human transmission.

Biological Pollution

Native species- Exotic Species – Invasive species

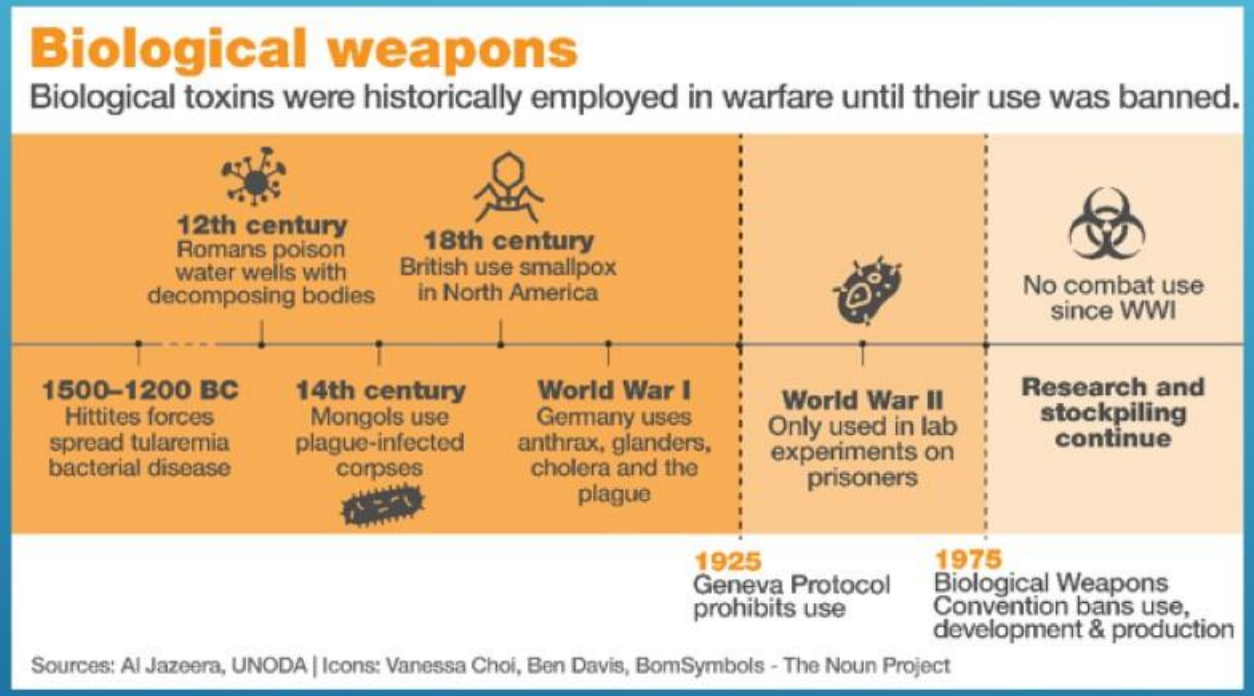
Native species are species that are specific to a particular area or region, and have developed adaptations to adapt to their environment over thousands of years of evolution, and have special functions in the functioning of the ecosystem in which they reside.

Exotic species is a general term used for species that settle (or are placed by human hands) in areas outside their natural range. Exotic species may not always have serious detrimental effects on the environment; they are often even economically beneficial.

However, invasive alien species compete for food, shelter and breeding ground with the species in the new environment they settle in, and can infect them.

Like other species, native species are in competition with the species they live with in the environment for environmental resources, and thus their population densities are balanced. Ancak iklim değişiklikleri, yangınlar, çevresel kirlilik gibi insan etkileri nedeniyle sayıları azabilir veya tam aksine bazı türlerin sayıları artabilir. Such situations can lead to very serious problems in the ecosystem.

Biological weapons:



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Biological warfare agents as threats to potable water.

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See commentary "Chemical and biological weapons: new questions, new answers," on page 931.
This article has been cited by other articles in PMC.

Abstract

Nearly all known biological warfare agents are intended for aerosol application. Although less effective as potable water threats, many are potentially capable of inflicting heavy casualties when ingested. Significant loss of mission capability can be anticipated even when complete recovery is possible. Properly maintained field army water purification equipment can counter this threat, but personnel responsible for the operation and maintenance of the equipment may be most at risk of exposure. Municipal water treatment facilities would be measurably less effective. Some replicating (infectious) agents and a few biotoxins are inactivated by chlorine disinfection; for others chlorine is ineffective or of unknown efficacy. This report assesses the state of our knowledge of agents as potable water threats and contemplates the consequences of intentional or collateral contamination of potable water supplies by 18 replicating agents and 9 biotoxins known or likely to be weaponized or otherwise used as threats.

Full text

Full text is available as a scanned copy of the original print version. Get a printable copy (PDF file) of the complete article (2.8M), or click on a page image below to browse page by page. Links to PubMed are also available for Selected References.

5. Radioactive Pollution

Through nuclear tests and nuclear power plants, radioactive materials accumulated in the atmosphere fall into the Earth by rainfall and enter the waters. Bu yoldan doğal su döngüsüne giren radyoaktif maddelerin yanı sıra, nükleer santrallerde meydana gelen sızmalar ve nükleer atıklar da radyoaktif maddelerin doğrudan veya dolaylı yollardan sulara karışmasına neden olmaktadır.