



War a threat to sustainable water supply

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WATER HAS BEEN used as an instrument of war throughout the history of mankind. Since water is vital to the survival of living things, it did not take much for humans to realize that water can be manipulated to bring an enemy to its knees. In modern day conflicts, water supply systems have been repeatedly used both as a means and a weapon of war. The experience in Former Yugoslavia shows that modern warfare disrupts water supply in many ways. There are mainly the following:

Destruction of water supply facilities

Pumpstation, mains and treatment facilities often became military targets and were deliberately targeted, hit and destroyed. Power stations and power lines, indispensable for most major water stations were hit as well. Example: In April 1994, the retreating forces blew up the major water plant in Gorazde, leaving 20 000 people without piped water. It took the ICRC several months to get it repaired.

Deliberate cutoff of water supply facilities

Cities and towns have been cut off from springs and treatment facilities as soon as they fall into the hands of the adverse party. Normally the facilities were not destroyed, but the valves were shut. Several times water supply has been used as a bargaining chip.

Example: During the conflict between the Croatian and the Moslem Forces in Central Bosnia, over 200 000 people were deprived of an adequate water supply, when valves were closed to Vares, Vitez and Zenica. When the fighting stopped however, supplies were restored within days.

Disruption of operation and maintenance

As war disrupts normal life, engineers could no longer do the necessary work to operate pumps and treatment plants. Often engineers were drafted by the army, and there was no one left to operate the pumps. The necessary chemicals for water treatment, like Chlorine and Aluminium Sulphate were no longer available, or their transport impossible. In conflict areas it was very difficult to find spare parts, and often they were no longer available. These spare parts however were indispensable to run the

pumps and to repair the leakages in the mains and distribution systems. Example: in Sarajevo, losses due to leakages were estimated by a specialized company to about 40% before the war, since then, they have doubled. Insufficient water supply is a threat to the public health. Due to the lack of piped water people were forced to use traditional water supplies which have not been used for a long time and which could be polluted.

Example: In Mostar, some 50 000 persons have used untreated water from the river Neretva for half a year, without causing major health problems. In Bihac however, over 500 cases of Gastroenteritis have been reported within two weeks, after the supply of raw river water into the distribution network.

What to do?

UN-agencies, the Red Cross and NGO's could do a lot to elevate the suffering, and to prevent a major disaster. Emergency water supply systems mostly standposts have been installed. Damaged and broken water supplies have been repaired thanks to the technical assistance of humanitarian organisations. Old water systems have been rehabilitated and in some cases new systems have been constructed, like a project by the Swedish Red Cross for 10 000 people in Derventa.

Another Red Cross programme provides chemicals like Aluminium Sulphate and Chlorine to most of Bosnia Herzegovina, to render water potable.

In theory, the International Humanitarian Law (Geneva Convention) forbids the use of water as means of war. The experience in Former Yugoslavia however shows that rules for the conduct of hostilities are often violated and neglected; and there is no one to enforce them.

With regard to the respect of International Humanitarian Law, two things must be improved. Firstly, the existing law, protecting the installation from being targeted, must be enforced rigorously. Destruction of water supply installations or closing of valves must be ostracised (in the same way as the use of chemical poison has been branded); and the International Community must demand to have the culprits brought to trial. Secondly, engineers have to be protected, in a similar way to the medical personnel, in order that they can perform their work.