

## Water under fire

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THE MEDIA, WITH their extensive coverage of war, can often induce tremendous public pressure on governments and agencies to become involved in facility provision. As a result, governments and donors become more willing to provide financial resources to improve the living conditions of war-torn people.

Consequently, despite the tragedy, war can also have positive effects on the sustainability of the community as long as governments, agencies and war-affected people work together. Ironically, therefore, post-war reconstruction of water supply systems can be an opportunity to reach millions of the previously unreached.

### The Media and War

War means a fresh ongoing source of news for the media which plays such an important role in generating public opinion in favour of agencies taking action to ease the sufferings of war-torn people. Cuny pointed out that: "...it cannot be denied that the press has enormous influence on the workings of the relief system at all levels. Extensive press coverage of a disaster can create tremendous pressure on agencies and governments to become involved (Cuny, 1993). However, Cuny explained that the media can also change public opinion quite significantly from one extreme to another by creating stars of certain kinds of victims, simplifying complex emotional issues and making myths about war and its victims. Mark Laity, BBC's defense correspondent who has worked in many war zones, claimed quite rightly, as a response to the author's question, that "the media is only interested in ratings not rationing" to explain the media's lack of interest for the problems of post-war communities. However, the media also brings pictures of suffering people with inadequate infrastructure systems into the comfortable sitting rooms of the Western world and increasingly into those of the growing well off is so called developing countries. Although we might find these pictures disturbing, they do clearly show something of the reality of everyday life for millions of unreached people in the developing world.

### War as an opportunity

Public opinion once generated can put pressure on governmental and non-governmental organisations to take action to improve the living conditions of war-affected people. Initially these actions are targeted at those displaced and refugees, but for the longer term, the eventual return and sustainability of the whole community has to be the only realistic aim. To do this adequate supplies of

water are essential. For example, the International Committee of Red Cross decided to execute water supply and sanitation projects in El Salvador during the guerilla-type conflict in 1984. However, to run a project they considered certain criteria, apart from say, the villages' health needs. The most significant of these was that "the community must lie in a conflict area" (Nembrini, 1994). Through these water and sanitation projects between 1984 and 1988, more than 110,000 people in the rural areas were provided with safe drinking water and adequate means of sanitation that contributed to improved hygiene and the environment generally in the villages. Further, the experience in Former Yugoslavia shows that with the cooperation of NGOs, donors and local governmental organisations, water supplies for the unreached can be improved. Although, the Former Yugoslavia may not be considered "unreached" in the conventional sense as a substantial proportion of people are provided with some means of water supplies, as a consequence of the war, the supplies were either damaged, became insufficient for the increased population by the influx of Displaced Persons and Refugees or in some cases when the new boundaries have been applied, water sources became inaccessible. Therefore, the water needs in many parts of the Former Yugoslavia have become very urgent requiring thorough attention for the short and long term socio-economic, environmental sustainability of the communities.

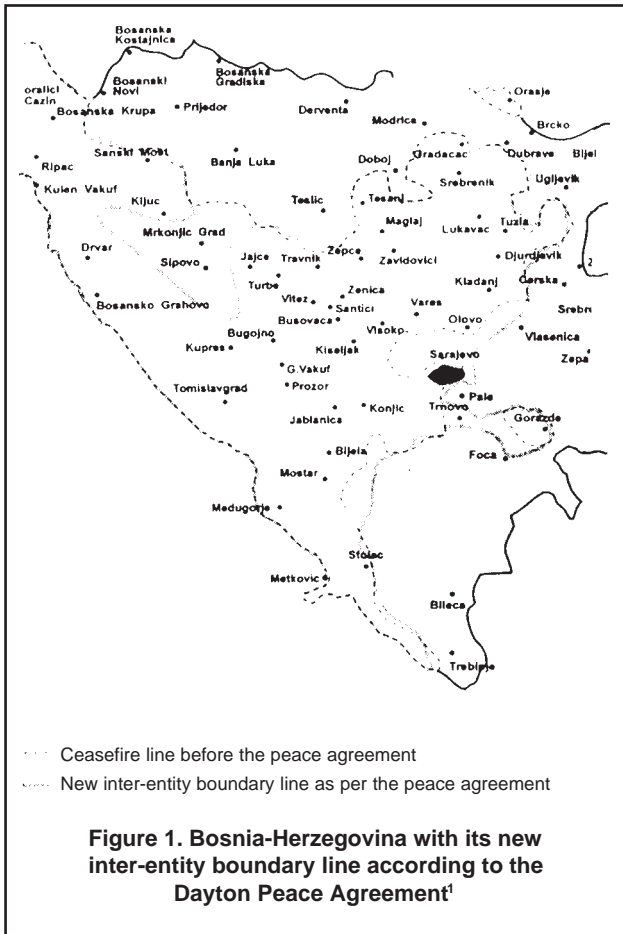
An example is, the Tuzla Water Supply Systems Project in Bosnia-Herzegovina (BiH) to improve supplies of water to Eastern Tuzla which is allocated for further development.

The project is a joint ongoing work between Scottish European Aid (SEA) and the Tuzla Municipality, was started in 1994 after both International Management Group (IMG) and UNHCR expressed interest in SEA undertaking this work as Tuzla has been experiencing severe water shortages.

The programme consisted of:

- the construction of 9,8km 500mm pipeline;
- the drilling one new borehole as well as refurbishment of 6 boreholes;
- the construction of pre-treatment and treatment plants for 200 l/s;
- new pumping facilities; and,
- connection to the town network.

The reasons behind this water shortage problem in Tuzla can be explained in two main groups.



- Lack of sufficient water supplies for the demand.
- High proportion of losses due to leakage.

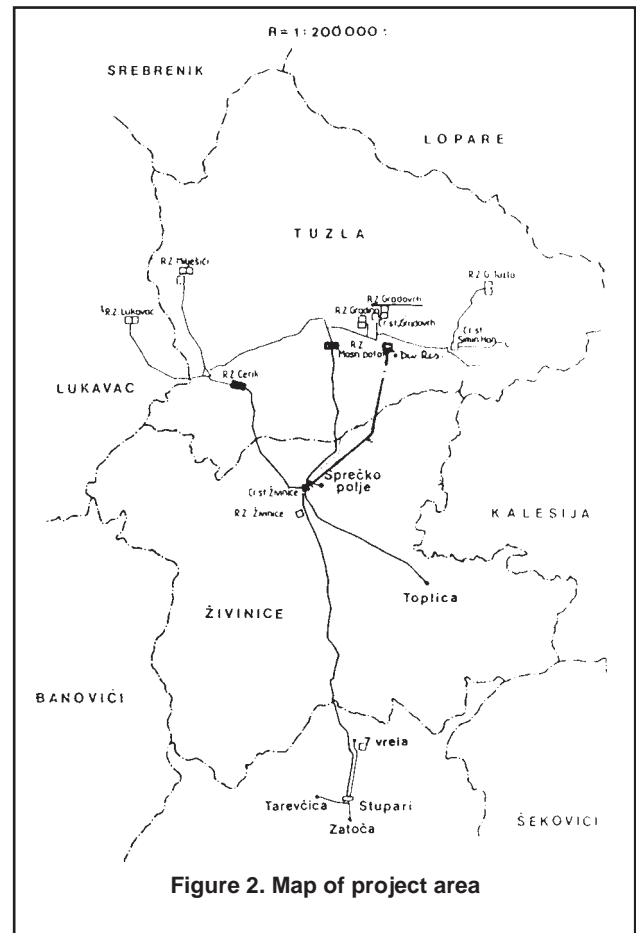
Tuzla water supply was mainly supplied from boreholes in Stupare and Toplica at the rate of 400 l/s. As this supply was not sufficient for the increasing demand, six boreholes were drilled in the Sprečko Polje area to supply another 200 l/s to the town. However, this system could not provide more than 130 l/s and in fact the amount of water decreased to 85 l/s in 1991. This was caused by mainly the absence of the pre-treatment and primary treatment of water to deal with the particular high concentrations of iron and manganese before the filtration phase.

Exacerbating the situation, there was a rapid increase in the population before the war as a result of the migration from rural areas of those seeking employment at the Tuzla's chemical and energy industries which made the demand for water more than the town's supply systems could provide. There has been a further increase in the demand for water as the 60,000 Displaced Persons and Refugees (DPs&R) have been added to the existing population of 130,000 since 1992 (TALDI<sup>2</sup>, 1995).

Although the water supplied is not sufficient for the demand, a huge proportion of it is lost through leakage before it reaches the consumer. The leakage from the distribution system is estimated around 50 per cent, though, some sources give this estimate as high as 80 per

cent. The town's water supply and sewage systems were damaged through ground subsidence as a result of intensive salt<sup>3</sup> exploitation which is the extraction of salt by injecting water and then, pumping brine from considerable depths below ground. The decades of implementation of this method caused the formation of large caverns deep beneath the town as well as the drastic fall in piezometric surface level causing the land to subside, destroying hundreds of residential buildings where more than 15,000 people used to live (Tuzla Municipality, 1995). In fact, the damaged water and sewage systems have been causing considerable danger to public health; when water is turned off in a water main, pressure falls and leakage while the pipe was under pressure may leak back into the main somewhat polluted.

The Tuzla Water Supply Systems Project, which is expected to be completed in Summer 1996, will provide the advantage of carrying water directly to Eastern Tuzla to relieve demand on the centre of town and allow badly needed repairs to the network to proceed more easily. In fact, SEA has already obtained some of the necessary funds from Swedish International Development Agency (SIDA) for a leak detection project with an estimated budget of more than DM 160,000. The entire leak detection programme for Tuzla is expected to take at least a year as soon as the rest of funding becomes available.



It should be borne in mind that Tuzla has been short of water for more than 15 years and the problem has only been exacerbated by the war. However, the cooperation between SEA and the local authorities has resulted in the implementation of the largest civil engineering project in Bosnia since the outbreak of the war. In this work, much emphasis is put on the use of local inputs; from project design and management, to labour and materials, by this means the improved system will be locally owned, maintained and managed in the future. SEA also pointed out that: *“If foreign agencies are responsible for every stage of emergency or development reconstruction work in this war-torn country, additionally confused by the collapse of the centrally planned economy, the very fabric of the local authorities could be undermined and a dependency on international intervention and funding inevitable”* (SEA, 1995). The opportunity created by war has been used to alleviate severe water shortages in Tuzla by attracting funds from the International Management Group (IMG) which used European Commission Humanitarian Office (ECHO) funding, UNHCR and Overseas Development Administration (ODA). These donors provided more than 3,1 million DM for SEA to assist the Tuzla Municipality for the implementation of the project. However, let us not forget that it would have been unlikely Tuzla would not have received any outside funding had it not featured so prominently in war reports by the media.

### Conclusions

The way communities are affected by war varies according to their strengths and weaknesses. Weaknesses tend to precede wars, contribute their severity and impede effective post-war reconstruction, while strengths can govern how well a community will cope with the effects of the war. On the other hand, war brings these weaknesses to the surface becoming more visible.

There is no doubt that war has devastating effects on the physical, social and economic structures of a community, but, it should be noted that the infrastructural and socio-economic problems already existed but were further exacerbated by war. Barakat pointed out that: *“There is no*

*stronger indicator than a national war to highlight the inherent weaknesses within a society and within its governmental organisations. Certainly, not all the problems we face in a post-war situation are caused purely by the war. The war may have acted beside its destructive role as a means of bringing into sight long existing problems that have only been magnified by the war”* (Barakat, 1993).

Despite the tragedy, the above demonstrates that war can also have positive effects on the sustainability of the community as long as governments, agencies and war-affected people work together for long-term sustainability of the community. Ironically, therefore, post-war reconstruction of water supply systems can be an opportunity to reach millions of the previously unreached.

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- <sup>1</sup> The Dayton Peace Agreement which was reached on 21st November 1995, created two entities in BiH, the Federation of Bosnia and Herzegovina and the Republic of Srpska.
- <sup>2</sup> Tuzla Agency for Local Development Initiatives.
- <sup>3</sup> The town's name comes from the Turkish word “tuz” meaning salt which has been the main source of income for the local economy.